THE

ECLECTIC REPERTORY

AND

ANALYTICAL REVIEW.

VOL. V. OCTOBER, 1815. No. IV.

SELECTED PAPERS.

Two Cases, with Observations, demonstrative of the Powers of Nature to reunite parts which have been, by accident, totally separated from the Animal System. By WILLIAM BALFOUR, M. D. Edinburgh.

[From the Edinburgh Medical and Surgical Journal for October, 1814.]

THE practice of ingrafting trees first suggested to medical practitioners the idea of repairing mutilated parts. This practice was successfully prosecuted by a few, when the state of society afforded opportunities, but has uniformly been treated with a certain degree of ridicule, by far the greater number of the profession. This distrust in the powers of nature, in the face, too, of evidence which it would be difficult to controvert, is not more unphilosophical in itself, than its influence on practice must be detrimental. What a man believes impossible he never will attempt. But if a branch of one tree unites with the stump of another, so as not only to live, but to bear fruit, it can be no great stretch of imagination to suppose, that a part totally separated from the animal system, may, under proper management, reunite and live, and perform all its proper functions.

A number of years ago, an accident happened, in the management of which I proceeded upon the principle of the

possibility of parts entirely separated uniting again, with all the success I could desire. This idea was suggested by the necessity of doing something without delay, and the recollection of the Taliacotian mode of forming artificial noses. At that time, however, I knew of no case in which even an attempt had been made to replace parts, as near being totally separated from the system as were those in this instance. This case I did not publish at the time it occurred, for reasons hereafter to be mentioned. Indeed it had almost gone out of mind till a fresh accident occurred, the cure of which by reunion, ranks, under all the circumstances of the case, among the most wonderful instances of the powers of nature, and for ever sets at rest the question, "Whether parts, which have been completely separated from the rest of the animal system, and in which circulation has ceased altogether, can be again reunited?"* There is a circumstance, too, which stamps a value and importance on the two following cases, above all, or most others of the kind,—that is, their authenticity, or the proof that can be offered, that the facts recorded really happened precisely as recorded; a proof which, from the number and respectability of the witnesses, must convince the most sceptical.

The recollection of what took place in the first case, left little doubt in my mind of an equally favourable result in the second; for I never attributed the least degree of the success attending the former, to the small slip of skin that remained undivided. It appeared to me highly improbable, that a connection so very slender could keep up circulation betwixt the system and the separated parts, with a vigour sufficient to keep the latter alive.

From the moment, therefore, I found reunion to have taken place, I began to suspect, that the precautions employed by Taliacotius, and his contemporaries, to keep up circulation in parts destined to supply the place of others, were unnecessary, and inadequate to the purpose. Can it be supposed, for instance, that an extensive surface cut out of the arm for forming an artificial nose, could be fed by a small attachment, with a

* Dr. Thomson's Lectures on Inflammation, page 230.

vigour at all proportioned to the celerity with which adhesion by the first intention takes place? It is impossible. Suppose a piece of skin, of such extent, were raised from any part of the body, and allowed to remain, without being connected with any other raw surface, how long, I ask, would that part of its margin, most distant from the attachment left to keep up circulation in the part, live? I am convinced very little, if any blood, would issue from it, except what might be in the vessels at the time of their being divided.

If, therefore, the connection left to keep up the circulation of the excised parts, in Taliacotius's operations, was insufficient for that purpose, these parts must be considered as having been in the same situation as if entirely separated from the system, and their adhesion to the parts to which they were applied as having depended, not on the circulation supposed to have been kept up in them, but on the principle of vitality remaining in them, and on the circulation having been restored to them, by the new surface to which they were attached.

With regard to circulation being kept up, in parts cut out of the forehead, as now practised in India,* it is out of the question. The twist given to the small attachment, left at the root of the nose, must almost entirely preclude any thing of the kind.

I am convinced, therefore, that had Taliacotius at once separated from the system, the flaps of skin with which he repaired mutilated parts, his operations would have been equally successful, infinitely less troublesome to himself, and distressing to his patients. With this conviction, arising solely

* A thin plate of wax is fitted to the stump of the nose, so as to make a nose of a good appearance. It is then flattened, and laid over the forehead. A line is drawn round the wax, and the operator then dissects off as much skin as it covered, leaving undivided a small slip between the eyes. This slip preserves the circulation till an union has taken place between the new and old parts. The cicatrix of the stump of the nose is next pared off; and, immediately behind this raw part, an incision is made through the skin, which passes around both *alæ*, and goes along the upper lip. The skin is now brought down from the forehead, and, being twisted half round, its edge is inserted into this incision, so that a nose is formed with a double hold above, and, with its *alæ* and *septum* below, fixed in the incision. The connecting slips of skin are divided about the twenty-fifth day, when a little more dissection is necessary to improve the appearance of the new nose.—Gentleman's Magazine for October 1794.

from the success attending the first of the following cases, I was resolved to attempt the reunion of any divided parts that might come in my way, unless such parts were of a magnitude that the apposition of the wounded surfaces would not restrain hæmorrhagy.

There are instances on record, with not one of which was I acquainted when the accident happened to my son, of the *points* of fingers, ears, noses, being nearly or entirely separated from the system, that were made to re-adhere. But Pedie's case, so far as I know, is without a parallel; and I have the authority of a number of the first characters in the profession in this place to say, that it is the most extraordinary that has come to their knowledge. This is my apology, if any is necessary, for giving it to the public. For "it must not be imagined, that the recital of such uncommon cases is without its use; for, while they extend our knowledge of the powers inherent in living bodies, they inform us of the advantage often to be derived from allowing these powers proper opportunities of exerting themselves. Of reunion, by adhesion, we are, in no case, to despair, so long as the least degree of circulation remains in both, or even in one of the parts divided*." To this I would add, that many things are left undone, from mere supineness, or a belief that they are impracticable, because they were never known to have been done before. Of what advantage then may it be, to be generally known, that such things as are detailed in the two following cases, are not only practicable, *but have been done?*

Individuals in every line of life, but especially those who work with edged instruments, or who are employed about machinery, would often have it in their power to prevent unsightly mutilations in themselves or others, and be enabled to earn their bread as before. Surgical skill is not necessary in all instances of such accidents. The chief thing wanted is, a conviction that attempts at reunion of divided parts *may* be successful; for whoever has this belief will not fail, when such accidents occur, to give opportunity to the powers of nature to exert themselves. There is, indeed, no saying what may be done in this way. It would be unphilosophical to set bounds to

* Dr. Thomson's Lectures on Inflammation, p. 243.

the powers of nature. And because noses, ears, and the *points* of toes and fingers, are the only parts which, when separated, are known to have reunited, is nature to be blamed for that? The reason is, the reunion of other parts has never been attempted. I would not, however, from these observations, be understood as imagining, that parts of very considerable magnitude, when totally separated from the system, can ever be expected to reunite. The impossibility of this is, I think, evident, *à priori.*

But the knowledge of such facts as occurred in the following cases, must, by increasing his confidence in the powers of nature, induce every rational practitioner to trust more to them, in many circumstances, than he otherwise would do. Therefore, though it would be madness to expect the reunion of a leg or an arm that had been entirely separated, yet I can very easily conceive a leg or an arm to be wounded in such a way, by accident, or in battle, as, according to received principles, to render amputation necessary, but which, in the hands of a surgeon, quite aware what nature can do, might be preserved. I can very easily conceive that, to a practitioner who knows that nature, by her own innate powers, unaided by a single auxiliary artery, can effect the reunion of a finger that has been entirely separated from the system for nearly half an hour, cases may occur, in which he will pause before he takes off a limb, which, but for such knowledge, he would amputate without hesitation. In this view, Pedie's case in particular, will, I trust, be an acceptable present to surgeons in the army and navy, where casualties occur so often, and of course there are such opportunities for observation, and warrantable experiment, and may be the cause of preserving limbs, which otherwise would be lost, to many a gallant man. At all events, it is evident, that the practice of attempting the reunion of separated parts, may be carried farther than has ever yet been done; and it must be a comfortable reflection to an unfortunate sufferer, in the hour of accident, to know, that a whole finger, or even all the fingers of a hand, though entirely cut off, may be restored.*

* A gentleman, to whom I told Pedie's case lately, expressed his regret that he had not known it sooner; for, said he, "Our blacksmith, a very clever

CASE I.

About eleven years ago, Mr. Gordon, surgeon, now, I believe, in India, after having conversed with me for some time one day, in my shop, upon going out shut the door smartly after him, without perceiving any body near it. Unfortunately, one of my sons, a boy of about four years and a half, diverting himself on the outside, had one of his hands in the groove of the hinge side of the door. I was shocked with a wild scream that I heard upon the door being shut; and still more so, when Mr. Gordon came in, carrying the boy in his hands, stretched, from agony, as upon a rack. The points of three of his fingers were completely separated, with the exception of a slight attachment of skin, which barely suspended the parts. The points hung at right angles when the fingers were extended. The point of the index was cut off at the middle of the nail, the fore-finger a little above the nail, and the ring-finger at the root of the nail. The wounded surfaces were necessarily much bruised, but the fingers were, nevertheless, cut so perpendicularly, that, unless I had seen it, I could not have believed a door could have done it. With the assistance of Mr. Gordon, the innocent cause of the accident, I instantly replaced the parts, with but little hopes, I confess, owing to the degree of contusion of the wounded surfaces, of reunion taking place. But I was so shocked at the idea of the boy's hand being mutilated for life, that I hesitated not a moment to put the powers of nature to the test. On the sixth day after the accident I removed the bandages, when I found adhesion had taken place, to the unspeakable joy of Mr. Gordon, the boy, and myself. The skin and nails came off all the three fingers, but were afterwards renewed; and the cure was so complete, that a narrow inspection was necessary to discover any difference between

fellow, a short time ago, struck off three of his fingers, from about the middle. He ran immediately, with the pieces hanging by small slips of skin, to the surgeon of the village, who out with his scissars, divided the slips of skin, threw the fingers away, and contented himself with dressing the stumps." Now, this gentleman did what almost every other surgeon would have done; but had he known Pedie's case, the blacksmith, a thousand to one, would have had his fingers to-day.

the fingers of the one hand and those of the other. There was, indeed, no difference to be perceived, but a slight scar on the left side of the ring-finger, at the root of the nail. This case I certainly would have published at the time it occurred, but on Mr. Gordon's account, who, though not the smallest blame was attributable to him, suffered more anxiety and distress of mind than I did myself, and never liked to hear the subject mentioned. I trust he will now excuse me for mentioning him by name, having no other motive for so doing, than the establishment, beyond the possibility of contradiction, of the truth and accuracy of the above statement. Mr. John Moffat, accountant of Excise, Mr. Alexander Milne, surgeon, now on board the Norge, 74, and my servants, were likewise witnesses to the facts. The boy died of the scarlet fever, a year and a half after the accident; and but for the following case occurring, which to most, I am sensible, will appear much more interesting and decisive, that of my son would never have been recorded.

CASE II.

On the 10th day of June last, two men came into my shop, about eleven o'clock forenoon, one of whom, George Pedie, a house-carpenter, had a handkerchief wrapped round his left hand, from which blood was dropping slowly. Upon uncovering the hand, I found one half of the index wanting. I asked him what had become of the amputated part. He told me he had never looked after it, but believed it would be found where the accident happened. I immediately dispatched Thomas Robertson, the man that accompanied the patient, to search for and bring the piece. During his absence I examined the wound, and found that it began near the upper end of the second phalanx, on the thumb side, and terminated about the third phalanx on the opposite side. The amputated piece, as measured by the patient himself, was an inch and a half long, on the thumb side, and an inch on the other. The wound was inflicted in the cleanest manner, by one stroke of a hatchet, and terminated in an acute point.

In about five minutes, as nearly as I can guess, Thomas Robertson returned with the piece of finger, which was white and cold; and I remarked to Dr. Reid, who was present, that it

looked and felt like a bit of candle. Without the loss of a moment, I poured a stream of cold water on both wounded surfaces, to wash away the blood from the one, and any dirt that might be adhering, from the other. I then applied, with as much accuracy as possible, the wounded surfaces to each other, expressing a confident expectation that reunion would take place.

I endeavoured to inspire the patient with the same hopes, by detailing to him the success I had in my son's case, which, for the reasons already mentioned, was to me quite decisive of the question, whether or not parts entirely separated from the system would reunite? All this was heard by the patient with a very apparent distrust. But I could do no more than tell him, that, if reunion did not take place, no harm could ensue from the attempt, and that, if it did, a great deformity would be prevented. I informed him, that unless pain or fetor, or both, should occur, I would not remove the bandages for a week at least; directed him to keep his fore arm slung, and not to think of any kind of work. At last he entered so far into my views as to promise punctual obedience. He called on me next day, when he felt no particular uneasiness, but remarked, that the wound had not altogether given over bleeding. Assuring him there was nothing in that, desired him to call on me every day; but did not see him again till the 4th of July! Concluding, from his absenting himself without assigning any reason, that he was one of those, too frequently to be met with in the lower ranks, who go from one medical man to another, just as their fancy strikes them, or as they happen to be advised by some of their foolish and ignorant neighbours, and whose ingratitude to any practitioner is in exact proportion to the good he does them, I suspected he had fallen into bad hands, and that I never would hear more of him. On the 2d of July, however, a gentleman called on me, and asked if I recollected a man who had got a finger struck off, about three weeks before, to have come through my hands?

I told him I recollected perfectly well; that I was filled with indignation at the fellow's unreasonable and ungrateful conduct; and that I was just about setting on foot a search after him, not having informed myself either of his name or place where he was employed, at the time he applied to me. The

gentleman said he would save me the trouble, for he could give me an account of the man.

The accident happened on the 10th of June, and on the 12th, the patient, under the influence of the ridicule of his acquaintances, for giving the least credit to my assurances that reunion would take place, applied to another practitioner. This gentleman, I am informed, on being told the object I had in view in replacing the piece of finger, represented the impropriety of any other person intermeddling with it. But, prepossessed with the belief that he carried about a piece of dead matter only, tied to the stump of his finger, the man insisted on having the bandages removed, which was done accordingly. Thus were nearly rendered abortive, my attempts at the reunion of the parts, and the profession deprived of a fact, which, as demonstrating the wonderful powers of nature to repair injuries, is inferior in importance, to none in the annals of the Healing Art. But, fortunately, nature had been too busy for even this early interference to defeat her purpose. ADHESION HAD TAKEN PLACE.

In consequence of the information I got from the gentleman who called on me on the 2d of July, I found out the patient on the 4th, when reunion of the parts was complete. The finger, in fact, is the handsomest the man has, and has recovered both heat and sensation. In the progress of the cure, the skin was changed, and, soon after the accident, the nail fell off; but I have not the smallest doubt that it will likewise be renewed.

From the information obtained, not only from the patient himself, but from those present when the accident happened, I am satisfied, that upwards of twenty minutes must have elapsed before the parts were replaced. For the patient did not apply to me *immediately* upon receiving the injury. He waited on the spot till a great number of his fellow workmen, separated in different apartments of a large building, came to see and condole with him on the occasion. The word *immediately*, in his affidavit, must therefore be understood as so qualified.

I have thought it proper to subjoin the affidavits of George Pedie, Thomas Robertson, and Dr. Reid, to the principal facts and circumstances of Pedie's case, that no doubt might

remain of their truth and accuracy. For "it must be confessed, that instances of reunion among parts which had been entirely separated, are very rare in the human body; so rare, indeed, that most practitioners still treat with disbelief and ridicule the few instances which have been put upon record."* These affidavits are still more necessary to convince people who are not of the medical profession, but to whom the knowledge and belief of such facts may be useful. Numbers of such having heard an imperfect account of Pedie's case, have called upon me to ascertain the truth; but I have never yet met with one who expected me to confirm the facts, of the *entire* separation and *complete reunion* of the parts.

I, GEORGE PEDIE, house-carpenter, declare, That, on the 10th day of June last, when at work in the Advocate's Library, I accidentally struck off the finger next the thumb of my left hand, at one stroke, with a hatchet: That, accompanied by Thomas Robertson, foreman of the work, I immediately went to Dr. Balfour, who, as soon as he saw what had happened, asked where the bit of finger was that had been struck off? That I said I did not know, but believed it would be found where the accident happened: That Dr. Balfour requested Thomas Robertson to go and bring it as quickly as possible: That Thomas Robertson went and returned with it in about five minutes: That Dr. Balfour immediately washed both it and my bleeding finger with cold water, and replaced the piece that had been struck off, and bound it up: That Dr. Balfour said he expected it would adhere, because he had been successful in a similar case eleven years ago, having replaced three of one of his son's fingers that had been cut off by accident, and which completely united: That I had no reason to go to any other than Dr. Balfour, but that I did not believe the part of my finger that had been cut off would reunite, and that I was laughed at by all my acquaintances for ever expecting that it would: That when the dressings were first removed, which was on the 12th of June, reunion of the parts was found

* Dr. Thomson's Lectures on Inflammation, page 239.

to have taken place. And I declare, that the merit of the cure belongs exclusively to Dr. Balfour. All which I declare to be truth.

(Signed) GEORGE PEDIE.
DUNCAN COWAN, J. P.

Edinburgh, 18*th July*, 1814.

Edinburgh, 19*th July*, 1814, Compeared Thomas Robertson, mentioned in the preceding declaration, who being examined, declares conform to the preceding witness *in omnibus*. And this is truth.

(Signed) THOMAS ROBERTSON.
DUNCAN COWAN, J. P.

I, PETER REID, physician in Edinburgh, declare, that I was witness to the facts and conversation stated in the above declaration by George Pedie; that I have this day examined his finger, and find that complete reunion has taken place.

(Signed) PETER REID, M. D.
DUNCAN COWAN, J. P.

Sworn before me, at Edinburgh, July 26, 1814.

From the above details, many questions naturally arise; any one of which I am far from pretending satisfactorily to answer. It is impossible, however, to dismiss such a subject without hazarding some observations.

What, then, is the process which nature follows in re-establishing a connection betwixt the animal system, and a part that has been entirely separated from it? It is agreed upon, as the result of observation, however inexplicable the facts may be, that when two recently divided surfaces, both of which are still connected with the system, are applied to each other, with a view to immediate adhesion, or reunion by the first intention, a layer of gluten is first interposed between them. It is reasonable to suppose, that both surfaces contribute equally to

the formation of this layer, which, soon after, is seen to be penetrated with blood-vessels. These vessels, however, are not unconnected, in any stage of their existence, with the surfaces. They do not begin in the substance of the layer and advance to the surfaces. They begin at the surfaces and advance towards each other; or, more properly speaking, they are the blood-vessels which had been divided, now elongated, through the medium of the organizable fibrin, for the purpose of reuniting the parts. Not so with parts that have been entirely separated from the system, and in which circulation has ceased altogether. The fibrin, in this case, must be effused from one surface only, that connected with the system. The vessels of this only can be elongated; and those of the separated part must be nearly passive in the process of re-establishing circulation. The separated part must be considered in a state of suspended animation, still possessing excitability. When new blood comes in contact with the open mouths of its vessels, it is probable that it is absorbed by capillary attraction. This new blood, being the proper and natural stimulus to its own vessels, must excite the dormant vessels to action; and upon this action must depend the connection that is formed between them and the vessels projected from the living surface. Circulation between the surfaces being thus established, must be gradually extended through the whole part that had been separated, by the *vis a tergo*, and the action of its own vessels.

Analogous to this is what happens to persons who are recovered from drowning. Though in them all the functions are suspended, the body is not dead. The principle of vitality still remains. It is, indeed, difficult absolutely to say when this principle is extinguished; at least, nothing short of the formation of new combinations can warrant the conclusion. Thus, though the body may have been a considerable time immersed in water, and is to all appearance dead, if the circulation of the blood can be restored, by the gradual application of heat, friction, and artificial respiration, it becomes reanimated, and is restored to the exercise of all its functions.

Extract of a letter from Mr. Bailey, of Thetford, Jan. 30, 1815.

"I was lately called to an accident which happened to a labouring man, at Croxton, a village near Thetford, who, in attending a chaff machine, worked by a horse, entangled his middle finger with the knives, by which the first phalanx was separated completely: he brought it to me, pale and nearly cold; I was willing to try how far union might be effected, and after cleansing the parts, I re-applied them accurately, and secured them by plasters and small pieces of cards by way of splints. I desired the man to call in a week's time, fully expecting to find the end of the finger mortified, but, to my astonishment, reunion had taken place; pulsation was felt at the end of the finger, and its colour was healthy; the end felt numb to him when he touched it; the nail has come away, and I have pleasure in saying, it is quite well and requires no more attendance."—*London Med. and Phys. Journal, March*, 1815.

Mr. Carpue is preparing for speedy publication, an account of a most interesting and fortunate operation, by which he has restored a nose to a military gentleman who had accidentally lost his original one on foreign service. Mr. C. had mentioned, in some of his lectures, the practice of Gaspar Taliacotius, the Bolognese professor, who, in the sixteenth century, published a book on the restoration of noses, lips, and ears; and also the operations of the Hindoo cast of brick-makers, by which they, for an unknown time, have restored the noses of the victims of despotic barbarism; and had stated his opinion, that the practice was rational, and not fabulous, as many persons had been led to suppose. This doctrine of so eminent a surgeon, coming to the knowledge of the gentleman above alluded to, he determined to submit to the operation, and placed himself under Mr. Carpue's care. Ours is not a medical work; we shall therefore state, in a popular way, that a plaster-model is made of a well shaped nose, which is fitted on the ruin of the former nose. The surface is then measured, by means of paper, and the paper-shape is carried to the forehead, a piece of which is marked of the very shape. This piece is then cut round by an incision, and stripped off in the manner

of a scalp, except the narrow slip, or isthmus, which joins it to the nose, through which isthmus the circulation of the entire system is to be kept up in the scalp, and the piece thereby kept alive. The scalp is turned at the isthmus, so that the cuticle of the scalp may become the cuticle of the nose. Incisions are then made in the cheek on each side the nose, and upper lip, into which the edges of the scalp are inserted, and in which it grows, hardens, and assumes a perfect shape. The nostrils are made afterwards, and the forehead heals while the nose is forming. Such has been the ingenious procedure of Mr. Carpue, and complete success has attended him. In the instance before us the patient has not had occasion to take a single dose of medicine, and has experienced no inconvenience from pain. The cuticle of the forehead is now quite restored, and the nose itself is already so well formed as scarcely to be distinguished from a natural one. It is now three months since the operation; but, in warm weather, Mr. C. is of opinion that the restoration would be completed in two months. His proposed work will inform the faculty of every particular which it is desirable should be known to those who have occasion to perform the same operation, and will be illustrated with several plates. The facts we have stated prove, that although Mr. Carpue has not the happiness to be the original discoverer of the principle which he has practised, yet he has singular merit in conducting the operation so successfully, and is entitled to his country's gratitude for introducing, with so much intelligence, a practice that will restore to society thousands who have been driven from it by their unsightly appearance. For our part, we view in the principle of reproduction, which this experiment so completely developes, new views of the animal economy leading to improvements in the practice both of surgery and medicine; and it justifies a sentiment which we have often pressed on the notice of the public, that there probably still exist, in the hands of the vulgar, meriting the attention of the most enlightened, very numerous discoveries as important as that of the cow-pox.—*London Monthly Mag. June*, 1815.

Observations on the Plague as it lately occurred in Malta.

By A. Brooke Faulkner, Physician to the Forces.

[From the London Medical and Surgical Journal for April 1814.]

Upon the pathology and treatment of this most unmanageable of all diseases incident to humanity—the plague—the late experience of medical men in this island, I regret to find, contributes but little to what is already so imperfectly known on the subject. Every attempt to accommodate its phenomena to the operation of general laws, or to discover any thing approaching to a successful method of cure, either by experiment or speculation, has shared the same unfortunate fate as in all former ages.

Such detached notes as I have been enabled to collect from personal observation and practice, I shall here throw together, rather to satisfy the curiosity of my friends who have solicited the offering, than with any expectation of materially benefiting the world by their importance.

Under the disadvantage of hindrance from visiting patients in the Maltese pest-hospitals, I am necessarily precluded from communicating many facts from my own experience, which I should otherwise have been enabled to do. This privation, I have, however, attempted to make up for by conferences with some of the most intelligent practitioners in the island; the results of which, together with my own observations and reflections, it will here be my purpose to render some account of.

The plague, above every other distemper with which I am acquainted, either by reading or experience, is one of the most irregular type, modified in its symptoms and appearances to a degree surpassing all belief and every attempt to explain, apparently by difference of constitution, age, temperament, manner of life, and other constitutional peculiarities in its victims. Most usually, however, its first approaches are marked by some of the following signs: headach, sickness, debility, stupor, rigors, vertigo, vomiting (of a vitiated bilious matter); pain of the back opposite to the region of the kidneys; suffusion of the eyes; an appearance of countenance resembling that of

a person recovering out of a severe fit of intoxication, and inability to stand upright, not unlike what occurs in that state; quick pulse; whiteness of tongue; costiveness; occasionally diarrhœa. Fewer or more of these symptoms, for the most part, characterize the disorder very early after its accession. But it sometimes happens, that, without any other previous indication, globular tumours give the first alarm of its presence.

Of the state of the pulse, I regret to say, I am not prepared to give any satisfactory account, as medical men were all alike absolutely interdicted from informing themselves upon the state of this function. By intelligent authorities, I have been confidently informed, that, at an advanced period of the disease, the pulse was so very much accelerated, as to render every attempt to count it almost impossible, the pulsations feeling rather to succeed each other in a continued stream than marked by any distinct intervals.

Apparently modified by the same peculiarities of constitution, &c. the character of the concomitant fever becomes extremely irregular, assuming every shade of variety from synocha down to the lowest degree of typhus; and, in some instances, having accessions of rigor, not unlike an irregular species of intermittent.

Thirst, the never-failing attendant on all other diseases which are accompanied with febrile symptoms, is not invariably present in the plague, even in the most urgent cases. In patients under excruciating distress, and at the very acmè of the disorder, I have known this symptom either wholly wanting or very moderate. The like remark holds of want of appetite. Throughout the disease, this function is not only not impaired, but augmented to a degree bordering on voracity.

The alvine evacuations are commonly of a darker appearance than natural. I have observed them of a greenish tinge, and mixed with scybala. When lumbrici accompany this state of the bowels, which is not unfrequently the case, they indicate a very unfavourable disease. The greenish colour of the stools was particularly remarkable in the patients in whom I observed voracity of appetite, and would seem to show that this symptom was occasioned by the generation of a strong acid in the stomach and primæ viæ.

It is a striking circumstance, that patients, often at the commencement of the disease, are adverse to admit of their being ill, and that they persist tenaciously in holding the same opinion, until matters proceed so far as to render any confession on the subject unnecessary.

The suddenness with which the plague attacks its victims is altogether incredible, persons being known to enjoy every appearance of good health a few minutes before its attack. The fatal termination is often not less rapid, occurring in a few hours. Certain cases, (though comparatively few,) have been protracted for a fortnight or three weeks before the patients have enjoyed any perfect exemption from danger; and, in some rare instances, after every apparent danger was survived, a phthisis or dropsy has supervened and proved fatal. This occurrence takes place, as might be expected, in persons of a very lax fibre and debilitated habit. Yet, seldom do seven days elapse, upon an average, from the first period of confinement, until the prognosis is decided with sufficient certainty.

Death very rarely follows a gradual extinction of the powers of life. In the greater number of cases it is ushered in unexpectedly by some violent delirious effort, or suddenly terminated in convulsions.

Delirium attends the plague in all its varieties and gradations, though in some cases there is no observable disturbance of the mental faculties at any time of the disease. In others this symptom is diversified from a state of the lowest insensibility to the very highest imaginable degree of excitement, resembling the fury, and accompanied with the actions of the maniac.

The state of the urine is various, being sometimes crude, at others high-coloured, and differing alike in point of quantity; but I did not see, nor could I learn, that the remission or aggravation of symptoms was indicated by any visible alteration in the appearance of this evacuation.

The accounts in circulation relative to the interval that passes from the first application of the pestilential poison until the production of the disease, are very discrepant. Whilst some persons are stated to have been attacked almost immediately after the noxious contact, others were represented to have con-

tinued well an incredible length of time, before any symptoms became evident. But I am certain, that no conclusive experiments have been instituted into this matter, as the people always strove to conceal their illness, along with the history of it, as long as in their power, knowing perhaps what they had to expect from the disclosure, and the consequences of removal to the pest-hospital,—that bourne from whence so few travellers returned.

About sixteen or twenty days are generally considered to be the greatest interval between the application of the cause and the first evidence of the complaint.

The matter of infection, of whatever nature it is, seems certainly to be of a very specific kind, as only communicable by the application of infected substances to the skin: at least the present times have as yet afforded no good reason for confidently believing, that it is received through any other medium than that of contact with the human body, *directly* or *intermediately*.

The many instances which have happened of whole families escaping the infection, after one or two of them had been removed labouring under severe symptoms of the disease, would seem to prove beyond a doubt, that a certain concurring state of the body was absolutely necessary for the reception of the pestilential virus. Several very remarkable cases of this were narrated to me, and some I have myself noted, of patients being taken from the bosom of their families in the most distressing disease, and with perfect impunity to those with whom they had communicated;—children from their mothers, and husbands from their wives. Yet these families had used no kind of precaution whatever, not so much as an attention to common cleanliness. To enter into a detail of such instances, would itself be a voluminous labour; they are matter of the most public notoriety. To go no farther than the regiment of De Rolls, the medical care of which was in a great measure entrusted to myself, I have known cases of plague taken out of the very heart of a company, and of so urgent a kind, as to prove fatal in a day or two, whilst the rest of their comrades continued to enjoy very perfect health. Neither was there here any obvious cause to which their escape could be ascrib-

ed,—oil frictions, fumigations, or any other description of precaution, prevention, or antidote. My own Calesse man and two of his children died of the disease, but his wife perfectly escaped, as did also his brother-in-law, who was constantly in the habit of familiar intimacy with them all. I am not acquainted with a poor family in Malta, who are more negligent of personal cleanliness than this I am speaking of. As to any precautions of rubbing with oil or vinegar, they were wholly ignorant of any thing of the kind, until I directed them, considerably subsequent to their misfortune.

Though for my own part I have a strong persuasion that the infection of plague may be not less liable to be received by that species of contact which can reasonably enough be imagined to take place by inhalation, I am not enabled to adduce evidence sufficiently satisfactory to decide the fact. I find there still exists a great contrariety of sentiment upon the subject. To determine the truth with precision would require a deliberate experiment, which I fear few would be disposed to make. The escapes of the attendants, who were necessarily much and closely engaged about the persons of the infected, holds out presumptive proof, that the matter of infection is at least not of so virulent a kind as to be carried deleteriously any great distance in the atmosphere.

Instances of reinfection have not been frequent, I am informed; yet, in one individual, I knew it to take place three times, in each succeeding one the symptoms growing milder. The example here alluded to furnishes an exception to the general remark, that the plague proves most fatal to those of a lax fibre. This person was of a remarkably delicate habit. Upon the comparative degrees of susceptibility of men, women, and children, I could not obtain any precise intelligence, or rather the accounts given to me were so much at variance, that little could be inferred from them. I think the balance was, upon the whole, rather in favour of the opinion recorded by some early writers, viz. that the two latter are the most liable to be infected, and that the debilitated of the same sex are more susceptible than the most robust.

As to the diagnosis in plague, it is often a point of much

embarrassment to pronounce with absolute certainty upon. The muddy dull eye, described by Russell, is, in my opinion, without doubt, one of the most leading and faithful monitors of its presence. I seldom found myself mistaken, in regarding a case as plague, when there was any unusual whiteness of tongue, accompanied with this appearance of the eye, even though there was no intumescence or redness about the glands visible, and the patient did not confess any complaint. When this appearance of the eye and tongue concurred with glandular swellings or external tumours, the point was placed beyond a doubt.

With regard to the prognosis, I think it may be generally assumed, that the less severe the affection of the brain is, and the more remote the symptoms from indicating a state of putridity, favourable hopes may be proportionably entertained for the issue. But here, too, our expectations were often suddenly frustrated; some cases which have gone on to prosper for several days terminating unexpectedly in death, whilst others, which continued for whole weeks, apparently in the most hopeless state, have as agreeably disappointed our fears, and been ultimately restored to pristine health and vigour.

Buboes, when they come out tardily, denote commonly an ungracious disease. When they go on speedily to suppuration, or when they recede whilst the other symptoms meliorate, there is the fairest hope of a prosperous event. The same may be stated of the condition of the carbuncles.

I need hardly observe that subsultus tendinum is a symptom which augurs an irrevocable fate.

It has been communicated to me with more confidence than most other peculiarities of the plague, that the nearer the glandular or other tumours or external appearances approach to the head, the prognosis is proportionally unpromising.

A diarrhœa coming on early to any great extent, when the brain continues much affected, is accounted among the signa infaustissima.

The spontaneous supervention of an early perspiration is a flattering omen. It seldom fails to relieve the febrile symptoms, and to be followed by general amendment.

In some cases the glandular swellings do not make their

appearance until very near to death, when some slight tumefaction is to be seen by a close inspection. Instances are not wanting after death, of these swellings subsiding entirely out of sight. After death, several cases have occurred of petechiæ manifesting themselves for the first time, when I have seen, also, very broad livid spots, covering the whole of the lower part of the trunk and extremities, of about the diameter of a quarter of an inch each.

The petechiæ which I observed upon the dead were various in point of size and colour; on one of a dark or dusky brown; on another, inclining more or less to lividity; on one they were almost imperceptibly minute; on another as large as flea-bites. Their seat is commonly over the breast, arms, or wrists, but they come out likewise upon the back or lower extremities.

The carbuncles that fell under my observation were of that kind described by authors as the wet carbuncle, sloughing into very deep sores, and attended, during the progress of inflammation, with an extremely painful burning sensation. At first they arise like a phlegmon, gradually acquiring a diffused and highly inflamed base, and having, not far from the apex, a concentric areola of a deep livid, and more internally of a cineritious colour, and a glossy appearance. The eruption of carbuncles is not confined to any particular part of the body or limbs, though more commonly their situation is upon some part of the extremities. Of the *dry* carbuncle, or that occasioned by the confluence of the pestilential eruptions, called blains, I have not had personal experience, nor have they been very often noticed by others. I have, however, received some account of them, as they occurred in a few cases, and which pretty exactly corresponds with the description given of them by authors, being of a dark gangrenous colour, without much pain, with little or no inflammation, and not elevated above the surface of the skin. They are accounted to designate a very unfavourable disease.

Irregular and inconstant as are all the phenomena of this perplexing disease, its varieties, as remarked on the late occasion, may, I think, be classified under the three following species, viz.

I. That in which, at the first attack, the energy of the brain

and nervous system is greatly impaired, indicated by coma, slow, drawling, or interrupted utterance. In this description of the disease, the tongue is white, but little loaded with sordes, and usually clean, more or less, towards the centre and extremity; the anxiety is great; cast of countenance pale; stomach extremely irritable, and the strength much impaired. Rigors and pain in the lower part of the back are among the early precursors of the other symptoms. This was observed to be the most fatal species of plague, and prevailed chiefly at the commencement of the late disasters. Those who were thus affected sometimes died in the course of a few hours, and with petechiæ.

II. The next species I would describe is, that in which the state of the brain is the very reverse of what takes place in the former, the symptoms generally denoting a high degree of excitement: the pain of the head is intense; thirst frequently considerable, though sometimes wanting; countenance flushed, and utterance hurried. The attack is ushered in by the same rigors and pain of back as in the foregoing. Epistaxis not unfrequently occurs in this class of the disorder. The glandular swellings come out very tardily, and, after appearing, recede again without any remission of the general symptoms. Carbuncles arise over different parts of the body or extremities, which are rapidly disposed to gangrenous inflammation. The delirium continues extremely high and uninterrupted, and the patient perishes in the course of two or three days. Sometimes he lingers so far as the seventh, yet rarely beyond this period, without some signs of amendment. Of this second description the examples have been very numerous, and were nearly as fatal as the preceding. In the countenances of some, just previous to the accession of the more violent symptoms, there is an appearance of despair and horror which baffles all description, and can never well be mistaken by those who have seen it once.

III. The third species which I would enumerate, is nearly akin to the last, only the symptoms are much milder, and the brain comparatively little affected. The buboes and other tumours go on more readily and kindly to suppuration, and by a prompt and early employment of remedies, to assist the sa-

lutary operation of nature, the patient has a tolerable chance of surviving. Cases of this class are often so mild, that persons have been known to walk about in seeming good health, and without any evident inconvenience from the buboes. Of this last species, the instances have, thank God, not been unfrequent, chiefly occurring towards the declension of the malady.

With relation to the means of prevention or cure, I have, alas, little to offer which flatter our expectations of subduing the enemy, or disarming him of his terrors.

Of the preservatives which have been most universally in repute, washing with soap and water, rubbing with vinegar and with oil, are the principal. But I am yet to learn of any well authenticated instances, which point out that any means of prevention have succeeded so well as a strict and unrelaxing attention to cleanliness, and shunning of contact with persons or things imbued with the contagion. These are the only means I have ever used myself, if I only except the oiled silk dress which I took occasion to recommend for the attendants of every description, in our military plague-hospital. Even without the dress, however, I have been in the habit of approaching close to patients in the most advanced stages of the disease, with no other safeguard than that of a sponge dipped in vinegar, held to my face. In the oiled silk dresses, as affording a protection against contact of infected substances, I have the greatest confidence. When persons are constantly obliged to be about the sick, and who have not a disposition to strict personal cleanliness, these dresses are, in my opinion, altogether invaluable as an armour.

Upon the preservative virtues supposed to be possessed by oil frictions I have many doubts, notwithstanding the terms in which they are mentioned by so respectable an authority as Mr. Baldwin, and their antiquity, being recommended by Celsus. I have made much enquiry into the subject, without being able, in any degree, to convince myself of the justice of the opinion which has been entertained of its anti-pestilential efficacy. So early as the time of Diemerbroek, that celebrated professor advised stimulant oil frictions, both as a preventive and remedy in the plague, for which purpose he particularly

recommended a combination of the oils of nutmeg, amber, cinnamon, mace, cloves, and some others, with which those who were obliged to go out of doors, or to be otherwise exposed to infection, were directed to rub every exposed part of the body, and over the region of the stomach. In perusing a late authority on this subject, I find there was an oil called κατ' ἐξοχὴν, *oleo di Gran Duca*, much in repute in Italy as a preventive. I have not been able to ascertain its composition, or indeed whether it was simple or compound. Thus far authorities are in favour of the practice. But, when it is considered what a great length of time has elapsed, since even the latest of the above cited authors flourished, and what havoc the plague has gone on to spread through the world since, I fear mankind have not much reason to confide greatly in the conservative virtues of oil, or any other antidote with which books make us acquainted. Like the amulet's charm and St. John's books, which have in their day, too, imposed on the credulity of man, it is to be feared that the belief in the efficacy of oil is revived only in its turn to fall into equal oblivion.

Orræus, physician to the late Empress Catherine of Russia, pointedly states, that those who were engaged in occupations connected with animal fats, were most liable to catch the infection of the disease.

But, even though I should not be altogether disposed to discard oil frictions as entirely useless, (for there is certainly some plausible reason for supposing that they may, in some measure, serve to defend the skin from absorbing the noxious matter of the plague), yet there have been so many instances of persons living in the closest cohabitation with the infected, escaping *without the use of oil*, as well as so few clearly attested cases of persons proved to have come into contact with the pestilential virus having been preserved by *oil alone*, that, in my judgment, the inference of its possessing any certain quality as a preservative against the plague is premature, and destitute of any sufficient support. The fact is, many of those who have most diligently used oil frictions have perished; and there are unfortunately several instances at the present moment in the third garrison battalion, of men being assailed by the plague, who, before mounting their guard, (which was the only

time they could possibly be exposed to the contagion) were obliged to apply the frictions of oil with all the punctuality of military discipline. Moreover, an immense proportion of the attendants of the sick in the Maltese pest-hospitals, who were enjoined the use of inunctions, have fallen sacrifices to the disease.

But to reason a little upon the point. How shall we have cause to credit that the application of oil frictions to the surface of the body is entitled to much confidence as a preventive, when we know that it is almost invariably attended immediately after with profuse perspiration? For as the perspirable matter can make its way outward through the excretory pores of the skin with so much facility, is it more unphilosophic to suppose, that when the perspiration has ceased, the subtile virulent matter of pestilential infection may make its way with equal facility inwards through the absorbent pores, at least sufficiently so as to exert its noxious effects upon the constitution? Without meaning to reason conclusively, I advance this as mere matter of speculation.

Those who have perused the account of the great plague in London, cannot have forgot the high repute in which tar, pitch, and some other substances were held as defences against the contagion. Indeed, as a farther exemplification of how far imagination is apt to impose upon mankind in these matters, almost every writer, from the time of Procopius to the present, supplies some instance or other of certain things possessing conservative virtues in this disorder. Among others, issues obtained the most unqualified credit. Girolami Mercuriale, whose authority as a writer was in no mean estimation for a considerable time among the Italians, when observing upon the efficacy of issues, uses these strong words: "Dicam quod ego experientiâ vidi. Possum testari me innumeros hâc peste extinctos vidisse, nec unquam quemquam qui habet cauterium præter unum tantum atque ille erat sacerdos." In this assertion, he is supported by several corroborating testimonies of the same time.

I have dwelt the longer on this subject, as it may be of some consequence that the credulity of mankind is not imposed upon to place confidence in any supposed means of preser-

vation which may only lead to greater risks. Of all the means which have come to us, recommended either in ancient or modern days, as productive of advantage in securing the safety of persons engaged about the infected, I believe none deserves the same degree of faith, as personal cleanliness, avoiding contact, or using immediate ablution after a foul contact; shunning the breath or the vapour exhaling from the bodies of the sick; ventilation; the fumes of the mineral acids; sustaining the animal spirits by generous living, and by exercise; and lastly, though not less importantly, by the use of oiled dresses, the texture of which is so completely stopped, as to prevent the passage of the most minute particles of any matter from without. In the dreadful plague, which, almost a century ago, swept off 50,000 inhabitants of Marseilles, it was by these means only, (the mineral acid fumes excepted,) that the faculty of physicians entirely escaped, though engaged throughout the whole of that mortality in the closest intercourse with the infected. The success of the same plan, as pointed out by myself in our military pest-hospital, is a decided proof of the credit which is due to this practice; not one of the attendants having been attacked with the complaint, though in constant habits of handling infected substances, and coming into contact with the sick.

All those whom I know to have felt the pulse of plague patients with the naked hand, have, by nothing more than a prompt ablution, escaped with impunity. They were not so much as provided with oil.

Vaccination, though it some time since obtained great repute as a preventive against the plague, and enlisted even the powers of the press in its praise, has not, upon the present occasion, appeared to justify any degree of faith in its virtues. Several observations have been attentively made, the result showing, that those who had not undergone the operation escaped in just as great proportion as the persons who had been vaccinated.

I have not noticed such striking effects from the variation of atmospheric temperature on the plague as I was at one time led to expect. I am aware, however, that there are not wanting some who imagine, that a diminution in the numbers of the infected was produced by this cause alone. I have, I think, much more invariably remarked, that a high wind, from what-

ever quarter it came, exerted much more evident effects in diffusing the contagion. Indeed, this was the subject of very universal observation; the people whom I have conversed with attempting to account for it, by supposing that the particles of contagion might be transported and driven with force from one person to another in the street. Lame as this account of the matter must be admitted to be, it will serve as a confirmation to the justice of the remark, that some increase in the numbers of the sick did very uniformly follow upon occasion of a high wind.

The declension of the malady towards the latter end of the summer and autumn, though ascribed by some to the variation of the atmospheric heat, was the plain and indisputable consequence of the rigorous precautions which then had begun first to be properly enforced. The point I think is proved from the suddenness of this change of measures in diminishing the numbers of the sick, and confining the disease almost entirely to the houses that had been previously infected, whilst the alteration of the thermometer was hardly perceptible.

I shall next proceed to give such an account of the method of cure as I have had an opportunity of gleaning from persons engaged in attendance about the sick, and from my own practice.

The indications are,

1. When inflammatory symptoms are violent at the commencement of the disease, to moderate them cautiously.

2. To restrain all inordinate efforts of nature, or to support her when exhausted.

3. To counteract putrescency.

4. To evacuate the morbific matter.

These it is proposed to fulfil, by Evacuants, Tonics, Antiseptics, Blisters, Sudorifics.

The evacuants most esteemed by the native practitioners, are mild laxatives,—as cream of tartar, manna, almond oil, &c. particularly this last. It is only at the very first attack that these opening medicines are usually employed by them, and when the bowels are evidently constricted. A purgative, properly so called, is very rarely ever exhibited by the Maltese in this complaint, unless in extremely plethoric habits, and

when there is a great phlogistic diathesis; then the Epsom, or *English* salt, as they call it, is given in a moderate dose.

Bleeding, either general or local, is held to be pernicious, and has seldom or never been had recourse to by the natives on the present occasion. I have myself, however, made trial of it locally, and in habits when, from the state of the other symptoms, and particularly the affection of the brain, I considered it indicated. In this case, I preferred taking away a few ounces from the temples by leeches. I am far from feeling assured, however, that any benefit was derived from the practice, nor am I certain that it has not paved the way for greater mischief, by increasing the indirect debility. It is at best, in my judgment, but a precarious remedy, and I believe it is considered as such by the almost universal consent of mankind, wherever the practice has had a fair trial. I have been informed by one individual, that in a few cases of blood being taken by him from the arm, it threw up a buffy coat, and the patients recovered. By another I was told, that the blood taken in this manner was in a very dissolved state, yet the case proceeded well. These were, by description, all persons of nearly the same habit, and in the same stage of the disease,—robust and plethoric.

When the affection of the brain is urgent, betokened by high delirium or a very low state of coma, I have applied blisters very generally to the temples, the nape of the neck, over the hinder or fore part of the head, or behind the shoulders. Blistering over the abdomen having acquired some degree of credit, I made trial of it also, but cannot give any decided opinion of its advantage. The Maltese practitioners seldom or never apply blisters unless under the buboes, and then only with the intention of promoting suppuration, which they are thought to do. In some rare instances they have put them to the nape of the neck, but without placing any great confidence in their success. Sinapisms have been much more confidently represented to me as effectual, when applied to the soles of the feet, with the view of relieving delirium by revulsion. Mild emetics of ipecacuanha are generally thought beneficial, when administered at the very onset of the distemper; given at a late period, they have not been attended with any success, or per-

haps have done positive mischief by determining too much to the brain.

The antispasmodics and tonics most esteemed by the Maltese are Colombo, Gentian, Peruvian bark, and Serpentaria Virginiana, each given in the form of decoction. These are prescribed at a very early moment, when the state of the brain allows of their exhibition, and after debility has begun to supervene.

The sudorific most in use by the natives, is the spiritus mindereri, given freely with plentiful dilution of lemonade, or other mild beverage, and aided by the free use of elder-flower tea. This latter is a favourite remedy among the Turks. My own practice has been entirely confined to the former. I have not been able to learn that antimonials have had any trial among the Maltese in this disease. Used by our military surgeons, antimonials have obtained rather a favourable character, in the form of James's powder, or the pulvis antimonialis of the London Pharmacopœia.

Vegetable acid, particularly lemon-juice, was given very freely in common drink by the Maltese, to which practice the Asiatics are likewise much devoted. But I cannot persuade myself that the promiscuous use of these acids is not pernicious, in cases where there is a strong disposition to the generation of acidity in the stomach and bowels.

The actual and potential cautery have each obtained repute for their efficacy in the maturation of buboes. They were resorted to by the native practitioners on occasion of these tumours coming forward very reluctantly, and when, at the same time, the other symptoms proceeded doubtfully or unfavourably. But when the actual cautery did not soon succeed in promoting suppuration, I have been credibly informed, that the tumours have receded, and this recession has been speedily followed by aggravation of all the other symptoms.

When the glandular and other tumours were accompanied with any great degree of pain, emollient poultices gave much relief. After they had degenerated into a sloughing state, warm stimulant applications produced good effects in causing the separation of the dead from the living substance. With the same intention I have seen camphor and oil of turpentine ap-

plied with benefit, whilst scarification also materially assisted in expediting this separation.

Camphor, given internally, has long maintained a great share of credit in the treatment of plague, exhibited in moderate doses, being considered useful as a stimulant and antispasmodic, and in certain states of the brain. It has not, however, been much employed by the Maltese. As far as my own observation goes, camphor, like some other medicines, appears to have been extolled for virtues, which experience by no means proves it entitled to.

Calomel has not been in use as a purgative among the native practitioners in the plague. It was in a few instances administered in small doses, as one of those gentlemen informed me, with the intention of co-operating with external mercurial frictions or applications for the maturation of buboes.

Opium is supposed in some cases to be good, when there is much restlessness, and provided the condition of the brain and other symptoms does not contraindicate its employment. I have myself not given it a trial. When it succeeds in composing the patient, and in favouring perspiration, it becomes a valuable remedy: but it is found necessary to use it with great circumspection.

Wine is not in very general use with the Maltese for the treatment of any stage of the disorder. In my own practice, I could ascribe much advantage to its cautious exhibition, at an advanced period, particularly when there was much debility and low delirium. I generally directed it to be given in sago, and in moderate quantity. When wine was employed by the natives, the sweet malaga was preferred.

Cordials were resorted to with equal caution as wine.

Some cases were detailed to me by the surgeon of the 3d garrison battalion, in which he thinks he succeeded in arresting the progress of the plague, by the very early and diligent application of mercurial frictions, giving previously not less than 12 grains of calomel, in robust habits, to clear the bowels. Of these cases, this gentleman informed me that he had not kept a detail, but in most of them, besides other suspicious symptoms, he said there was the evidence of tumefied glands. The patients rubbed in the ointment themselves. Bleeding,

either general or local, was not employed but in one or two of these cases. The warm bath was tried with a few, and seemed to be of some advantage in assisting the operation of the emetics.

I have tried the cold affusion in two cases, in one of which it appeared to produce very immediate good effects. The patient was soon relieved in all his feelings, and there succeeded a perspiration, aided by sudorifics and diluents, which in a short time put to flight all the symptoms. The cold water was applied about the third day after his confinement. Along with the remission of other symptoms, the bubo disappeared. This was a case in every respect such as Dr. Currie describes as adapted to the experiment in typhus. In the second instance, I had not the same reason to hope for its good effects, on account of the length of time that passed previously to its employment, and the exhausted condition of the patient.

A Maltese practitioner detailed to me one very striking instance of the good effects derivable from the sudden application of cold water. The case was that of a man who, in the height of delirium, and labouring under a most unpromising disease, ran violently out of his chamber, and precipitated himself into the sea, from which he seemed to have experienced the most sudden relief. He repeated this a second time of his own accord, and was soon restored to a state of convalescence, from which he perfectly regained his usual good health. This case, too, was one, in all respects, from the description I received of it, well suited to the experiment of the cold affusion. The application of cold water to the surface, has had no trial in the Maltese pest-hospitals.

The theriaca continues in some estimation among the Maltese, as a sudorific and febrifuge, and was usually given in the evening.

The Maltese have been under the same restrictions in feeling pulses in the plague cases as the English. They consider it themselves as altogether an unprofitable risk among the means of judging of the patient's situation, regarding the state of the other functions as a sufficient direction for every purpose of practice.

Such is nearly the sum of the information I have been ena-

bled to collect upon this disheartening subject; the result of which, I deeply lament to see, goes to verify the words of the poet:

> Dum visum mortale malum tantæque latebat
> Causa nocens cladis, pugnatum est arte medendi,
> Exitium superabat opem, quæ victa jacebat.

So true is the observation of the celebrated physician Chicoyneau, that there is no disease in which so many modes of treatment have been devised without effect.

With respect to any point which I have here treated upon the representation of others, I shall hope for every due forbearance, should I have failed, in any respect, in my intention of fully and exactly producing the meaning of my authority. I might have noticed many other opinions, but conceive that what are already stated embody the sum nearly of what is most important to be dwelt upon with any earnestness. In a word, I believe it may be roundly asserted, that, after all this fatal experience, not one single remedy has been stumbled upon in which any certain efficacy was discovered to reside, and that the practice in plague is still at the present day little more than an empirical routine.

No one more sincerely laments than myself, the restrictions which were laid upon scientific investigation, to explore the nature of this destructive disease, particularly as so fair an opportunity of obtaining some useful knowledge respecting it may perhaps never again offer to a British practitioner.

It is pretty evident, from the crude detail I have succeeded in gleaning of the notions entertained by the practitioners of this island, respecting the treatment of the plague, that they still adhere to the old opinion of its belonging to the class of putrid typhus, and that their practice, with the exception of bleeding, is not far different from that recommended by Sir John Pringle in malignant fever.

It will be easily believed, that, the dissection of dead bodies was a privilege quite out of the question, since the mulct for feeling a pulse, even through a tobacco leaf, and with every possible caution, was not less than 15 or 20 days close quarantine.

The principal navy-surgeon of this station was confined to his house for twenty-five days, on account of having felt the pulse of a man in his own particular department, and though, after the contact, he used every kind of care to prevent the absorption of the virus. This gentleman, Mr. Allen, was one of the most zealous advocates for carrying the investigations of science to unravel the mysterious nature of this distemper, whose hindrance in so laudable a purpose is the more to be lamented.

It may be proper to notice, that his excellency Lieutenant-General Oakes, whilst opposing my desire of visiting the Maltese pest hospital, was pleased to assign as his motive for so doing, an anxiety that the army might not be deprived of medical assistance in the time of need. Could I have myself ventured an opinion upon the subject, in opposition to so high authority, I should certainly not have hesitated to say, that this prohibition of medical officers from visiting the sick, so far from being an eligible measure, was calculated to oppose the most complete impediment against availing the army of any benefit whatever from their advice, by shutting out the only satisfactory inlets to medical knowledge. If this be not admitted, it must follow, I should think, that it was of very little consequence whether medical men were employed or not.

It may be expected that I should say something on the history and introduction of the plague into this island. The most current account is, that of its being brought in by a vessel from Alexandria, laden with linen, flax, and leather. But as there were so many channels through which, from the state of the quarantine defence, this insidious malady may be supposed to have crept in, it appears to me little less than mere waste of time, to take any pains in tracing this event to any particular instance of laxity in the department of public health. It is somewhat remarkable, that the history of the introduction of the plague, when it made so great ravages on the last occasion in this island, above a century ago, was nearly similar to what is circulated of the present, being attributed to some linen brought from a Levant vessel by a Maltese shopkeeper; which, after producing the disease in all those who first came in contact with it, ultimately disseminated the malady through the

whole population. The same delay, too, which proved so fatal in the present instance, was at that time also the cause of the extension of the disorder. Whilst the different colleges on the continent of Europe were referred to for their opinions on the identity of the disease, it was daily gaining ground: and when finally the answers of those colleges arrived, deciding upon the nature of it, a lamentable proportion of the population had already been carried off. So necessary is it to oppose with vigour the first advances of this deadly enemy, and by the earliest moment to be prepared against his attempts. The faculty of Rome, addressing a Maltese physician at that time on the precautions to be enforced for the public safety, emphatically observes, "Denique licet, aliqui negent eum morbum pestis contagiosæ nomine insigniendum, tamen in casu ancipite, ubi de publica salute agitur, tutior pars eligenda etiam cum incommodo rerum, ne serpet latius malum." This is the doctrine which was so unfortunately thrown away upon ourselves at the present time. It would not, perhaps, be strictly in place, to produce any detail of examples to prove the truth of this, else I might, even from my own limited experience of the proceedings of that department, fill a great many pages upon this topic alone. To pass over every other instance, I may merely observe, that the servants who conducted the first case of plague to the Lazaretto, returned in eight days, and mixed at liberty with the population; that the physician who attended this case was likewise at liberty to go through the city before being subjected to any quarantine restrictions; that the public hired carriages were allowed to take fares, though lined with cotton; that, for several weeks after the plague entered Valetta, the intercourse among the population was more or less promiscuous, the seclusion of people within their houses not being enforced with any punctuality; that even the carter who drove a pest-cart was not put under quarantine restrictions for a considerable length of time, in consequence of which he was in the frequent habit of going out at pleasure, and marketing for his family, the greater part of whom died of the plague. Since so many instances existed of laxity in the department of public health, can it be wondered that the plague had a rapid and wide circulation? Nay, until the month of July was well ad-

vanced, there was not even yet a corps of *trusty* guards organized to give proper effect to any ordinances of public health. The houses of the infected inhabitants were shut up for weeks, without being purified or cleansed, although containing articles of the most susceptible kind, and even living animals; whose escape, it is well known, is liable to carry the disease wherever they went. But, without troubling the reader with any farther enumeration of such instances, the following public advertisement, under the auspices of the Board of Health, will itself sufficiently exhibit the description of *obedience* which was exacted to the regulations of that body. I quote an extract from this advertisement, in the exact terms in which it was printed: viz.

"ADVERTISEMENT.

"Many of the inhabitants who *may be desirous* of taking every precaution against the scourge of plague, are unacquainted with the necessary measures which should be adopted:" here followed a number of recommendatory rules, and among others, to avoid eating *pork*, and concluded with observing, that "the chief of every family who *wishes* to adopt these precautions, must announce his *intention* to his dependants, who, not consenting to conform thereto under the apprehension of the rigorous punishments prescribed for the violation of the quarantine laws, will be allowed to quit the house."

"*Board of Health*, 12*th May*, 1813.

"J. THOMAS, President."

Thus the grand punishment for violating any of the quarantine laws, was no more than that the delinquent should "be allowed to quit his house;" get the disease, of course, and carry it about to his neighbour! What despondent reflections must not such an appearance of blindness to our danger have been calculated to raise in the mind of any one duly apprised of the consequences? I confess I saw it with horror and impatience, which caused me to take pains in pointing out my sentiments freely, and with an earnestness, which, considering the manner in which the offer of my advice was received, nothing but a strict and conscientious sense of my duty could have prevailed with me to do.

I trust it will never be seriously attempted to impute to the Maltese any positive disposition to oppose the laws of the health department; for, in justice to these worthy and unoffending people, as far as my own experience has gone, I never witnessed so much truly christian patience, as they evinced in every instance of compliance with the restrictions imposed upon them; that is, after these restrictions did really come to them in the full shape and authority of law. But until an adequate sanction was provided to give the law the necessary efficacy, we cannot be surprised that the multitude, ignorant of their danger, should not have been, of their own accord, very rigid in the observance of any rules or regulations, which, from the manner of their being executed, it is possible they might have thought were not intended to be very religiously obeyed.

The following few remarks, the result of about half an hour's visit to the Maltese pest-hospital, on the 2d of June, may convey some faint idea of the sufferings and privations to which those labouring under this horrible disease were subjected. These miserable creatures lay within a very short distance of each other, five or six on the floor of the same room; 28 of them were attended by two convicts. They had no change of linen, and were therefore obliged to lie, either without shirts, or in their foul every-day clothes. As my object in requesting permission to visit this hospital was to obtain some useful knowledge of the disease, and its treatment, I was prepared with a series of interrogations to put to the medical men whom I accompanied thither. It will not be supposed that my curiosity was likely to be very satisfactorily gratified, when I was told that there was neither book nor register, of any description, in which the details of treatment, or any history of the cases were noted. The small rooms in which the sick lay not being purified and whitewashed before fresh cases were put into them, became, in consequence, mere hot-beds of fomites.

The report of a very respectable and intelligent practitioner, Mr. Saunders, late of the royal navy, who, like myself, was allowed to visit this hospital only once, on the ground that the patients might not be disturbed in their last moments, is as nearly as possible coincident with the above. This gentleman

farther states having seen both sexes lying in the torments of the disease, in the same apartment, and having asked likewise for some account of the medical treatment, was very little more fortunate than myself, being referred for his information to a piece of board exposed at the outside of the pest-house door, on one side of which was written in chalk the medicine for the day (spiritus mindereri), and on the other, the medicine for the night (the theriaca), without any regard to individual peculiarities, age, sex, temperament, habit, condition of the symptoms, or any other particular of the sufferers' state.

Those who have witnessed the scenes of misery occasioned by the disease among the poor class of Maltese, must the more devoutly render their thanksgiving to God for his merciful forbearance to themselves. Whole families have been literally swept off in the space of a few days; and when a sufferer escaped the common fate of his countrymen, it was but to witness the destruction of any little property he had been possessed of. Bereft perhaps of every relative, and every friend he held dear, his return to a desolated abode was all the consolation he had to compensate for the loss of every thing else which could render life desirable.

The proportion of recoveries among the Maltese has been variously stated, but I believe the most authentic account does not place it above one in ten, or thereabouts, on an average. At the beginning few or none escaped, but towards the wane of the distemper, the cases became fewer and milder.

Amidst this scene of calamity, it must afford very inexpressible gratification to know how few of our countrymen have fallen sacrifices to the disease, and that the army has been so far fortunately preserved. The inheritance of a sound constitution and difference in mode of living may probably have very much contributed to confer this greater degree of security. Every credit is certainly due to commanding officers, for their early attention to some of the most necessary precautions. The 14th regiment and artillery enjoyed peculiar advantages in the situation of their barracks, which shut them out completely from all possible communication with the population. The garrison battalion and De Roll's lost the most men; which can only be ascribed to their being placed in situations of greater

exposure. In all, our army has not hitherto lost above 20. I have not, however, seen the returns of the garrison battalion, since it has become a second time infected.

Before I conclude this paper, it is proper to observe, that the information I have collected from the native practitioners, is much more the result of their speculation than practice. Their treatment of the plague, according to every account I have received of it, is very simple and summary. With perhaps every inclination to pursue inquiry, and to assist their fellow-mortals, they had certainly but few facilities to encourage them in either the one or other of these offices. Patients were not placed under their care, in the greater number of instances, before the disease was advanced, and when the golden moments for rendering them any assistance had irrevocably passed. As there is no disease in which the maxim of *venienti occurrite morbo* is of such important application as in this, the consequences of delay in sending patients to the hospital must have been inevitable.

Not having myself any concern with the department of public health, it is not in my power to furnish any of the numerous public papers relating to the progress of the calamity. This task must therefore devolve upon those whose connexion with that department, or better opportunities, have procured access to these papers. It may, doubtless, be matter of much curiosity to peruse such documents; but from all I have myself seen and learnt, I do not flatter myself with much expectation, that the sum of our knowledge, either upon the nature of the disease, or the manner of treating it, is likely to derive from them any materially useful augmentation.

The deaths occasioned by plague in the several months, are as I have below copied them from the printed notices, viz.

Abstract of the number taken ill and dead of the Plague in Malta, 1813, as copied from the printed notices.

Month.	Dates.	Died.	Sick.	Total Died.
April.	1	1		1
May.	3	1		
	7	2	1	
	12	1		
	16	3	1	
	17		1	
	18	2	5	
	19	8	3	
	20	10	11	
	21	6	5	
	22	6	5	
	23	4	3	
	24	7	3	
	25	4	4	
	26	5	10	
	27	5	17	
	28	7	10	
	29	16	12	
	30	10	15	
	31	12	16	109
June	1	18	11	
	2	8	13	
	3	13	17	
	4	19	11	
	5	16	31	
	6	24	22	
	7	19	14	
	8	28	11	
	9	24	26	
	10	32	33	
	11	27	36	
	12	33	40	
	13	36	14	
	14	36	17	
	15	19	15	
	16	19	16	
	17	23	30	
	18	28	25	
	19	21	24	
	20	13	22	
	21	24	34	
	22	32	19	
	23	29	30	
	24	33	44	
	25	23	36	
	26	34	36	
	27	39	39	
	28	37	46	
	29	44	56	
	30	47	48	804
July.	1	53	44	
	2	42	43	
	3	44	34	
	4	53	46	
	5	43	53	
	6	49	57	
	7	58	54	
	8	54	36	
	9	51	51	
	10	52	30	
	11	56	56	
	12	63	60	
	13	59	54	
	14	53	61	
	15	63	30	
	16	67	30	
	17	36	37	
	18	50	47	
	19	41	29	
	20	43	47	
	21	41	41	
	22	55	30	
	23	47	37	
	24	43	43	
	25	43	41	
	26	53	51	
	27	47	63	
	28	64	36	
	29	51	50	
	30	53	49	
	31	63	38	1596
Aug.	1	53	41	
	2	64	27	
	3	48	41	
	4	27	39	
	5	21	20	
	6	43	24	
	7	33	20	
	8	35	20	
	9	28	24	
	10	26	28	
	11	28	24	
	12	26	26	
	13	31	26	
	14	31	29	
	15	26	39	
	16	34	28	
	17	29	28	
	18	32	28	
	19	38	45	
	20	27	27	
	21	33	39	
	22	32	28	
	23	34	17	
	24	33	23	
	25	33	30	
	26	31	11	
	27	38	18	
	28	27	17	
	29	25	25	
	30	29	15	
	31	28	29	1023
Sep.	1	20	32	
	2	37	13	
	3	33	53	
	4	32	23	
	5	28	15	
	6	33	33	
	7	34	32	
	8	37	14	
	9	31	15	
	10	29	14	
	11	25	22	
	12	17	14	
	13	26	7	
	14	17	18	
	15	17	14	
	16	30	22	
	17	23	8	
	18	12	20	
	19	20	16	
	20	24	19	
	21	21	9	
	22	12	7	
	23	12	6	
	24	16	12	
	25	11	14	
	26	11	9	
	27	19	10	
	28	12	19	
	29	15	13	
	30	14	9	675
Oct.	1	16	11	
	3	12	11	
	4	16	10	
	5	10	5	
	6	7	9	
	7	14	9	
	8	13	1	
	9	9	3	
	10	8	3	
	11	5	4	
	12	3	8	
	13	5	3	
	14	4	2	
	15	3	2	
	16	5	5	
	17	5	3	141
				5348

The average deaths per day being now so very inconsiderable, I would indulge every hope, that a due perseverance in the necessary means of caution may soon finally put a period to our alarms. My only apprehensions arise from the negligence which may take place in the expurgation of infected houses, and the destruction of susceptible articles liable to retain the contagion.

Observations on the Functions of the Brain; by Sir Everard Home, Bart.*

[From the Transactions of the Royal Society of London for 1814. Part II.]

The various attempts (says Sir Everard) which have been made to procure accurate information respecting the functions that belong to individual portions of the human brain, having been attended with very little success, it has occurred to me, that, were anatomical surgeons to collect in one view all the appearances they had met with, in cases of injury to that organ, and the effects that such injuries produced upon its functions, a body of evidence might be formed, that would materially advance this highly important investigation.

Effects produced by an undue pressure of water upon the Brain.—Before I enter into the particular effects that take place when pressure is made upon the brain, by means of water, it is necessary to mention, that sudden pressure of any kind upon the cerebrum, takes away all sensibility, whether made upon the external surface through the medium of the dura mater, or upon the internal parts through the medium of the ventricles, and sensibility returns as soon as the unusual pressure is removed.

Faintness is the consequence of the pressure, to which the cerebrum has been accustomed, being suddenly taken off.

I am induced to believe that pressure, to a certain degree, uniformly kept up, is necessary for the performance of the healthy functions of the cerebrum; and any increase or diminu-

* The facts contained in this most curious paper, will tend to disturb some of the speculations of the craniologists, and they consequently merit the early attention of all our scientific and other inquisitive readers.

tion of this pressure puts a stop to them. It is asserted, that in addition to this pressure, the pulsatory motion of the blood in the arteries of the cerebrum is also necessary; but the late John Hunter, whose accuracy in a point of this kind is not to be doubted, retained his senses, although the heart had apparently ceased to act.

Although insensibility is the common effect of undue pressure upon the cerebrum, it appears, from what will be stated, that it is not a necessary consequence of undue pressure upon the cerebellum.

The facts which have been stated, appear to point out the use of the water in the ventricles of the brain, and they account for the great variety which is met with in the form and extent of the posterior cornua of the lateral ventricles, their size varying according to the quantity of water which is necessary to keep up the pressure required.

The size of the ventricles would appear to be very immaterial, since, even when they are increased so as to contain about six ale-pints, the functions of the brain are all carried on, and the growth of the body proceeds; but, after the skull is completely ossified, an increase of two or three ounces produces insensibility.

That the ventricles should admit of being increased to so great an extent, without any of the senses or faculties of the brain being destroyed, is in itself a curious fact, and of so much importance with respect to the physiology of the brain, that I shall detail the two following cases, which illustrate one another.

In the one, the accumulation of water proceeded, as it will appear, as far as it could go without materially impairing the organ; it then stopt, and the boy grew up, with all his faculties: in the other, the water continued to increase, the substance of the cerebrum was absorbed, and the faculties of the brain were destroyed.

A boy, at a month old, had so rapid an increase of the size of his head, as to evince an accumulation of water in the brain; and when he was five years old, the head was so large that the parents, judging from recollection, believe that it never after increased. It was so transparent, that when exposed to

the sun, the rays passed through it as they would through a horn lantern. He was unable to walk. At this age, he caught the natural small-pox, which was so violent as nearly to prove fatal. Upon his recovery, the head showed no disposition to increase, and the child, in all respects, began to improve, and for the first time learnt to walk. At fourteen, the skull appeared completely ossified. At nineteen years, the time I saw him, he was five feet six inches high; his head measured in circumference thirty-three and a half inches. He had grown in the course of the last year about two inches, which is more than he had usually done in any one year.

All the organs of sense are entire; savoury food is agreeable to his taste, but he is moderate in eating. His sight is good, but looking with attention at objects more than half an hour, appears to strain his eyes. His head is so heavy, that the muscles of the neck are unable to support it for many hours together: when he lies down, the head is supported by another person.

He sleeps with most ease on the right side, and the left side of the head appears to the eye to be rather the largest. In lying down, there is, what he describes to be, a momentary thrilling heat felt on the upper part of the brain, in the line of the longitudinal sinus. Lying on his back strains his eyes so much, that he cannot continue in that posture; stooping forwards, brings an oppression upon his eyes. The least weight in his hand, as a tea-cup, makes it tremble; all sudden noises jar his head, and produce giddiness. When he falls down, the jar renders him insensible; at one time this was the case for fifteen minutes, without being attended with any bad consequences. His head aches when exposed to heat. He has had no illness since the small-pox. His sleep is easily broken: he never dreams. He is fond of reading and writing; has a taste for poetry, and can repeat verses out of Cowper. His memory of common things is very good. He never expressed any attachment or passion for women. He is of a mild disposition; but when irritated, his whole frame is in a state of agitation, which, however, soon goes off.

In another boy, the enlargement of the head was perceived at three months, and increased for three years, and then ap-

peared to be stationary; and the child, till that period, was sensible. The upper part of the skull from that time began to ossify, and in three years more there was only an irregular space at the fontanelle, and a small space between the two portions of the os frontis remaining open. The child continued sensible till three years old, and then became gradually less so; did not know what it did; heard sounds, but could not see. At six years old he died.

The child was three feet three inches high, the skull twenty-seven inches round; the water contained in the two lateral, and third ventricles was six ale-pints and a half in quantity. The cerebrum formed a thin case of medullary substance surrounding this cavity. The cerebellum was entire.

	lb.	oz.	dr.
The weight of the whole brain was - - -	2	3	1
The weight of the whole brain of a child between six and seven years - - - - -	2	12	0

The preceding facts explain satisfactorily that the cerebrum is made up of thin convolutions of medullary and cortical substance surrounding the two lateral ventricles; which are unfolded when the cavities of those ventricles are enlarged, and in this unfolded state, the functions belonging to this part of the organ can be carried on.

Although the quantity of water may be so much increased without material injury to the functions of the brain when the skull is not ossified; yet after that period, even a few ounces in the lateral ventricles has been known to produce so much undue pressure, as to bring on head-ache, general uneasiness, a sensation as if the head were too large, loss of spirits, convulsions, loss of memory of recent events, idiotism, insensibility, and death.

When the water, instead of being contained in the general cavities of the lateral ventricles, is principally confined to their posterior and anterior cornua, the effects sometimes are occasional constipation, pain in the bowels, and lower part of the belly. When accumulated in the third ventricle, without any increase in the lateral ones, distressing pain in the head, loss of speech, and insensibility have occurred. When accumulated in the ventricles of the brain, and also under the tuberculum

annulare, painful sensations in the stomach, bowels, lower belly, and across the legs, have been met with. When not only in the ventricles, but between the tunica arachnoides and pia mater, over the hemispheres, and also upon the tubercula quadrigemina, the apparent consequences in one case were depression of spirits, pain in the back of the head, and mania. When in the ventricles, and also between the tunica arachnoides and pia mater, and between the dura and pia mater, melancholy, imbecility, apoplexy, and paralysis of one side, have been the accompanying symptoms. When in the ventricles, where there has been an unusual vascularity of the dura mater, violent affections of the præcordia have occurred in the night during sleep, which have led to suicide. When between the dura and pia mater in considerable quantity, a state of melancholy and imbecility of mind has been met with.

Effects produced by concussion of the Brain.—Concussion of the brain produces delirium and coma; these symptoms go off, they sometimes in a few days return and prove fatal. In the torpid state commonly attendant upon any violent shake being given to the brain, the senses are so much impaired, that little information can be gained respecting the effects produced upon the internal organs. The bowels have been found under such circumstances to be acted on by aperient medicines with great difficulty.

Effects produced when the blood-vessels of the Brain are preternaturally dilated or diseased.—Sudden dilatation of the blood-vessels of the cerebrum, in consequence of exposure to the sun, is sometimes accompanied by delirium, loss of speech and the power of swallowing.

A dilated state of the veins of the cerebrum has been attended with head-aches, which are very severe when the body is placed in a horizontal posture.

When the smaller arteries of the cerebrum are preternaturally enlarged, while those of the cerebellum are not, delirium has taken place, followed by a fit resembling apoplexy, and a paralytic affection of one side.

An obstruction to the passage of the blood through the right internal carotid artery, was attended by a succession of slight apoplectic fits, unaccompanied by any paralytic affections.

An aneurismal enlargement of both the internal carotid arteries, to the size of marbles, projecting into the cavernous sinuses, was the only apparent cause of attacks of mania, with consciousness of being insane.

Effects produced by extravasated blood.—Blood in the lateral and third ventricles was attended by repeated fits of vomiting and coma. In the fourth ventricle, a fit which in twenty-four hours terminated in death; under the anterior lobes of the brain by hiccoughs and stupor; under the cerebellum, by convulsions of the neck and body, with drawing up of the feet without stupor; in the folds of the pia mater covering one hemisphere, by a paralytic affection of the opposite side, without any other symptom.

Blood in the folds of the pia mater over the posterior lobes of the brain, and serum in the cornua of both the lateral ventricles, were attended by giddiness, paralysis, straight objects appearing crooked, loss of memory, and at last idiotism. In the right thalamus nervi optici, extending into the lateral ventricles, by paralysis of the left side of the body, both eye-lids closed, the mouth drawn on one side, a perception of light with the right eye, but not with the left, succeeded by coma. Between the dura mater and skull covering the right hemisphere, by stupor, which went off on its removal; but taking off the pressure produced faintiness for a few minutes.

Coagulable lymph spread over the union of the optic nerves, the pineal gland, and tuberculum annulare, was followed by permanent contraction of the muscles between the occiput and vertebræ of the neck, dilatation of the pupils, and a great degree of deafness. Serum under the cerebellum by restlessness, convulsions, incessant talking, at times incoherent, and the eyes became insensible to light.

Effects produced by the formation of Pus.—Pus in the cornu of the right lateral ventricle, was accompanied with delirium and convulsions. Under the tuberculum annulare, by vomiting and delirium. Under the dura mater covering the right hemisphere, by delirium succeeded by coma. Under the left parietal bone, by watchfulness, sickness, irregular pulse, clammy sweats, talking incessantly. These effects went off on its removal: the quantity a tea-spoonful.

Effects produced by depression, and thickening of different portions of the Skull.—Unusual pressure of the skull upon the middle lobe of the brain, was attended with pain in the stomach, torpor of the bowels, nausea, retching, pain between the shoulders, and in the feet. On the upper part of the hemisphere, want of sleep, head-ache, and stupor. Those effects went off upon its removal. On both of the anterior lobes of the brain, heaviness, loss of memory, depression of spirits, bordering on idiotism. On the anterior lobes of the brain, accompanied with water between the tunica arachnoides and pia mater, covering the superior part of the hemispheres, an apoplectic fit, heaviness, loss of memory, and a second apoplectic fit, which terminated in death. On the lower and lateral part of the left posterior lobe of the brain, uneasiness in the skin of the left cheek, extending along the chin, throat, and trachea, hissing noise in the ears, inability to speak the words the person wished to articulate, using others in their place, although conscious of doing so, and unable to correct it. Numbness in the arms and legs. These effects ceased on taking off the pressure. On the anterior lobes of the brain, both anteriorly and laterally, with thickening of the pia mater, spasms in the lower extremities, and total loss of memory, so that the person did not know what he had done a few hours before; although in other respects in health. On the lower and lateral portions of the anterior and middle lobes of the brain, head-aches, general wasting, irregularity in the action of the bowels; the feel of inability to swallow, and great distress in the act of swallowing, with great general irritability.

Effects of pressure from Tumours.—An hydatid imbedded in the substance of the right hemisphere of the brain, was attended with violent head-aches, and occasional fits similar to those of apoplexy. A tumour in the substance of the posterior lobe of the brain, was attended with derangement of the functions of the stomach and bowels, double vision, and afterwards loss of sight. A tumour pressing on the left hemisphere, settled melancholy, drowsiness after dinner, requiring being carried into the air, which took it off; but it returned on coming back to the table. A tumour in the fourth ventricle, epileptic fits, soreness in the throat, and great pain in the act of degluti-

tion. A tumour in the tuberculum annulare, and water in the ventricles, pain in the head, stumbling in walking, the mouth drawn on one side, loss of sight of one eye, although the pupils were not affected; dullness in hearing, difficulty of swallowing, so as to die starved, with all the mental faculties entire.

Effects of injury to the substance of the Brain.—A deep wound into the right anterior lobe of the brain, attended with inflammation and suppuration, produced no sensation whatever; the sense remained entire, and the person did not know that the head was injured.

The brain shooting out in the form of fungus, after the dura mater is wounded, has no effect upon any of the nerves, nor is it attended with sensation; but the inflamed pia mater gives great pain.

Loss of a portion of the medullary substance of the anterior lobe of the cerebrum, produced no symptoms. Loss of a portion of one of the hemispheres was attended with difficulty of swallowing for twenty-four hours, and slight delirium of short duration. Ulceration of the anterior lobe of the brain, as low as the anterior cornu of the lateral ventricle, but not communicating with it, paralysis of both arms.

In a case of a penetrating wound into the right hemisphere of the brain, with bone forced into its substance, while there was an opening for the discharge of matter, no effects were produced, except when the circulation was much increased, and then only head-ache and numbness in the left side.

Effects of alteration of structure in the Brain.—In a case in which the tuberculum annulare had undergone a change in its texture, and become so hard as with difficulty to be cut with a knife, a considerable quantity of earthy particles being intermixed with the medullary substance of the crura, and other parts of the cerebellum, and the cerebrum and upper part of the cerebellum unusually soft; the effects were, the boy had been an idiot from his birth, never walked, spoke, or understood what was said. Went often three days without food. At sixteen, when he died, was no bigger than a child three years old, except the head, which was as large as it is usually at twelve.

Effects of injury to the Medulla Spinalis.—Pressure upon

the medulla spinalis in the neck, by coagulated blood, produced paralytic affections of the arms and legs, all the functions of the internal organs were carried on for thirty-five days, but the urine and stools passed involuntarily.

Blood extravasated in the central part of the medulla in the neck, was attended with paralytic affection of the legs, but not of the arms.

In a case where the substance of the medulla was lacerated in the neck, there was paralysis in all the parts below the laceration; the lining of the œsophagus was so sensible, that solids could not be swallowed, on account of the pain they occasioned.

Where the medulla in the back was completely divided, there was momentary loss of sight, loss of memory for fifteen minutes, and permanent insensibility in all the lower parts of the body. The skin above the division of the spinal marrow perspired, that below did not. The wounded spinal marrow appeared to be extremely sensible.

Extract of a Report, presented to the French Institute on the 26th of Frimaire, in the year XIII. by Messrs. Guyton Morveau and Chaptal, on the Question whether the Manufactures which exhale a disagreeable odour can be injurious to health. Translated for the Eclectic Repertory, from the Bulletin of the Society for the Encouragement of National Industry. No. 116. *February*, 1814.

This important question, on which the minister of the interior consulted the first class of the Institute, essentially affects the prosperity of our manufactures. In order to effect a satisfactory solution, the committee have deemed it their duty to take a general view of the arts to which the strongest objections have been made. They have divided them into two classes: the first, comprehending all the arts, the operations of which discharge into the atmosphere, as the consequence of putrefaction or fermentation, certain gaseous emanations, which may be considered as disagreeable in smell, or dangerous in effect; such as the rotting flax and hemp, the making of

catgut, and starch, slaughter-houses, tan-yards, breweries, &c. The second class comprehends all those in which the artist, operating by the action of fire, disengages in the form of vapour or gas, various principles, which are more or less disagreeable to respiration, and which are reputed more or less injurious to health. In this class may be included the distillation of acids, of spirits, of animal matter, the gilding on metal, the preparations of lead, copper, mercury, &c.

The arts comprehended in the first class, in relation to the health of the community, deserve particular attention; because the emanations disengaged by fermentation and putrefaction, are really injurious to health in some cases and under particular circumstances. For instance, the process of rotting, carried on in stagnant waters or pools, infects the air and destroys the fish: the diseases occasioned by it are well known and described; hence wholesome regulations have directed in most places, that this operation should be conducted beyond the limits of the towns at a certain distance from every habitation; and in waters the fish of which do not constitute the food of the people.

The other operations performed on vegetables, or on certain products of vegetation, for obtaining fermented liquors, as in breweries, for extracting colours, as in the manufacture of turnsole, alga tinctoria, and indigo, or for depriving them of certain principles, as in the making of starch, paper, &c. are not of a character to excite any solicitude on the part of the magistrate. In all instances, the emanations arising from these articles in the state of fermentation, can only prove dangerous immediately near the vessels or apparatus; they cease to be so when mixed with the external air; hence a little precaution will obviate all danger. Moreover there is no danger to the inhabitants in the neighbourhood; the persons engaged in the works can alone be affected; accordingly, any regulations directing the removal of such works out of the towns, and at a distance from any dwellings, would prove at once unjust, vexatious, and ruinous to the arts, without remedying the evil incidental to their operations.

Some preparations extracted from animal substances often require the putrefaction of these substances, as in the making

of catgut; but more frequently the substances are liable to become putrid, by remaining too long in the factory, or by being exposed to too great a heat. This is particularly observable in dyeing cotton red, in which a large quantity of blood is employed. The effluvia exhaled from these putrid articles, extend to a great distance, and form, in the neighbourhood, an atmosphere very disagreeable to respiration. It is the duty of the police, to cause these substances to be frequently renewed, so as to prevent putrefaction, and to direct the observance of sufficient cleanliness in the factories, so that no putrid filth shall be collected from the animal substances which have been employed.

On this account, slaughter-houses may be considered nuisances, but not such as to require their being removed out of town, or collected in one place. A little attention on the part of the magistrate, so that butchers shall not throw out the blood and the offals of the animals they have killed, will fully prevent every thing offensive or unwholesome which the slaughter-houses might occasion.

The conversion of human ordure into a powder has been lately introduced in all the large towns of France; the process necessarily occasions, for a length of time, the evolution of a very disagreeable odour. Such establishments ought therefore to be formed in very airy situations and at a distance from all habitations.

A very important observation here presents on the spontaneous decomposition of animal substances; it is, that the emanations appear to be less dangerous in proportion as the articles which undergo putrefaction are less humid. In this case, a considerable quantity of carbonated ammonia is disengaged, imparting its predominant character to the volatilized matters, and correcting the bad effects, which might be deleterious.

Thus the decomposition of stercoraceous matter in the open air, and in situations where the inclination of the ground allows the fluids to run off, the decomposition of the remains of the cocoons of the silk worm, evolve an enormous quantity of carbonated ammonia, while the same substances immersed in water, or moistened with this fluid, exhale miasmata, faint, nauseous and dangerous to respiration.

The numerous arts in which the manufacturer produces and diffuses in the air, by the aid of fire, and as the consequence of his operations, vapours more or less disagreeable to respiration, constitute the second class of those remaining to be examined.

These are more interesting than the first, and much more intimately connected with the prosperity of national industry, and more frequently the subjects of indictments brought before the magistrate; and on this account, they merit a more particular attention.

The acids, the preparation of which may excite some complaints on the part of those living in the neighbourhood of the laboratory, are the sulphuric, the nitric, the muriatic, and acetous.

The sulphuric is obtained by the combustion of a mixture of sulphur and saltpetre. In this operation it is difficult to prevent an odour, more or less marked, of sulphurous acid, from being diffused round the apparatus where the combustion is carried on; but where the process is skilfully conducted, this odour is scarcely perceptible in the laboratory; it causes no danger to the workmen, who breathe it daily, and no complaint on the part of the neighbours can be well founded. When the manufacturing of sulphuric acid was introduced in France, the public opinion was strongly expressed against the first establishments. The odour produced by the burning of matches in our kitchens contributed not a little to magnify the effect that would be produced by the rapid combustion of some hundred weights of sulphur. At present these prejudices have subsided; and in the very hearts of our towns these manufactories are observed to flourish without the slightest inconvenience or molestation.

The distillation of nitric and muriatic acids occasions no more danger than the making of sulphuric acid. The whole operation is performed in vessels of glass, or stone ware; and it is unquestionably the interest of the manufacturer to diminish, as much as possible, the loss or volatilization. Notwithstanding every attention in the process, the air of the laboratory will be impregnated with the particular odour of each of these acids; nevertheless respiration is free, and perfectly safe.

The men who are constantly engaged in the works, are not incommoded, and the neighbours can have no right to complain.

Since the manufactories of white lead, verdigris, and the sugar of lead have been multiplied in France, vinegar has been more extensively employed.

When this acid is distilled to adapt it to some of these purposes, a very strong smell of vinegar is widely diffused, but unaccompanied by danger: when, however, a solution of lead in this acid is evaporated, the vapours partake of a sweetish character, and produce, on the persons who habitually breathe them, all the peculiar effects occasioned by the fumes of lead itself. Happily these effects are confined to the workmen engaged in the laboratories, and do not extend to the persons who live in the neighbourhood.

The preparations of mercury and lead, and those of copper, antimony, and arsenic, the process of gilding on metal, are all fraught with some danger to the persons inhabiting the laboratories, or assisting in the operations; but the effects are confined to the limits of the building; the workmen and manufacturers are alone exposed to any risk or danger. The means of preventing these ill effects are worth the attention of chemists, many of the inconveniences have been already obviated by the construction of flues, which conduct the vapours beyond the sphere of respiration; and, at present, the attention of the administration might be confined to directing science in the means of perfecting the processes, as far as they are susceptible, in regard to health.

The formation of Prussian blue, the extraction of the carbonate of ammonia by the distillation of animal substances in the new manufactories of sal ammoniac, produce a great quantity of fœtid vapours or exhalations: indeed these exhalations are not dangerous to health; yet, the proprietors of these establishments, when looking out for a situation, ought to prefer one at a distance from any habitation. But when the establishment is already formed, it will be sufficient if the proprietors are required to construct very high chimnies so as to dilute the disagreeable vapours produced in these operations. This mean is particularly practicable for Prussian blue.

Though the committee of the institute confined their atten-

tion to the principal manufactures against which violent clamours had been raised at various times, and in various places, yet we remark, from the preceding statement, that there are few which are injurious to the health of the neighbourhood.

Hence the magistrate ought to reject the ill founded complaints, which are too frequently directed against the establishments, menacing the fortune of the manufacturer, and retarding the progress of industry; he ought to be on his guard against the conduct of a jealous and troublesome neighbour: he ought carefully to distinguish what is inconvenient and disagreeable, from what is noxious or dangerous; in a word, he ought to be impressed with this truth, that in listening to complaints of this nature, the consequence would not only be, that the establishment of many useful arts would be prevented in France, but insensibly, the blacksmiths, carpenters, joiners, coppersmiths, coopers, brass-founders, weavers, and generally all those trades which more or less incommode the neighbours, would be excluded from our towns; for in fact the arts just mentioned annoy the neighbourhood more than those formerly noticed; and the only advantage they have over the latter, is the long time they have been followed. Their right of domicile has been confirmed by time, and the public necessity.

The committee are of opinion that the Institute ought to take advantage of this circumstance, to place the manufactories under the special protection of the government; and to publish, that the manufactories of acids, of sal ammoniac, of Prussian blue, of sugar of lead, of white lead, the slaughter-houses, the manufactories of starch, the brewhouses, the tan-yards, do not render the neighbourhood unhealthy, when they are well conducted.

The same cannot be said of the rotting of hemp, of the making of catgut, of the collections of ordure, and in general, of all those establishments where a large quantity of animal or vegetable matter is subjected to a moist putrefaction; in these instances, besides the disagreeable smell, there are disengaged miasmata, which are more or less noxious.

The manufactures alluded to, though not injurious to the health of the neighbourhood, ought not the less to be placed under the direction of the administration: to the proprietors

ought to be prescribed the measures the most proper for preventing the diffusion of the odours and smoke through the neighbourhood. This may be accomplished by an amelioration of the process, by the erection of high boundary walls, so that the vapour may not be spread to the adjoining houses; by improvements in the management of the fire, so that the smoke may be consumed or deposited in the long flues of the chimnies; by the observance of great cleanliness in the laboratories, so that no matter may putrefy, and that all the offals susceptible of fermentation may be deposited in deep sewers, and may not, in any way, incommode the neighbours.

The committee observe, that when it is proposed to form new establishments of Prussian blue, of sal ammoniac, tanyards, manufactories of starch, and in general of all manufactures producing vapours very disagreeable to the neighbours, or danger from the apprehensions of fire, or of explosions, it would be at once prudent and just to declare, that these establishments cannot be formed within the towns, or near any dwellings, without a special permission; and in case the proprietors have not complied with this indispensable condition, the removal of the establishment may be enjoined without the right of indemnity.

The result of this report is, first, that the manufactories of catgut, the collections of ordure, the establishments for rotting, and likewise all those where large quantities of vegetable and animal matter are collected and allowed to rot and putrefy, render the neighbourhood unhealthy. All these ought to be removed out of the cities, at a distance from any dwelling; secondly, that those manufactures in which disagreeable odours are disengaged by fire, as in the making of acids, Prussian blue, sal ammoniac, render the neighbourhood dangerous only from the want of caution; and that the attention of the police should be confined to the improvement of the processes, and the management of the fire, and to the observance of suitable cleanliness; thirdly, that it would be worthy of a good and wise administration, to pass ordinances prohibiting for the future, within the towns, or near any habitations, the establishment of all manufactures really disagreeable or dangerous to the neighbours, without previous permission. In this class may

be comprehended the conversion of ordure into powder, tanyards, the manufactories of starch, founderies, the manufactories of candles and soap, slaughter-houses, the collections of offals, the making of Prussian blue, of varnish, of glue, of sal ammoniac, potteries, &c.

On the Fracture of the Carpal extremity of the Radius. By A. Colles, M. D. one of the Professors of Anatomy and Surgery in the Royal College of Surgeons in Ireland.

[From the Edinburgh Medical and Surgical Journal for April 1814.]

The injury to which I wish to direct the attention of surgeons, has not, as far as I know, been described by any author; indeed the form of the carpal extremity of the radius would rather incline us to question its being liable to fracture. The absence of crepitus, and of the other common symptoms of fracture, together with the swelling which instantly arises in this, as in other injuries of the wrist, render the difficulty of ascertaining the real nature of the case very considerable.

This fracture takes place at about an inch and a half above the carpal extremity of the radius, and exhibits the following appearances.

The posterior surface of the limb presents a considerable deformity; for a depression is seen in the fore-arm, about an inch and a half above the end of this bone, while a considerable swelling occupies the wrist and metacarpus. Indeed, the carpus and base of the metacarpus appear to be thrown backward so much, as on first view to excite a suspicion that the carpus has been dislocated forward.

On viewing the anterior surface of the limb, we observe a considerable fulness, as if caused by the flexor tendons being thrown forwards. This fulness extends upwards to about one-third of the length of the fore-arm, and terminates below at the upper edge of the annular ligament of the wrist. The extremity of the ulna is seen projecting towards the palm and inner edge of the limb; the degree, however, in which this projection takes place, is different in different instances.

If the surgeon proceed to investigate the nature of this injury, he will find that the end of the ulna admits of being readily moved backwards and forwards.

On the posterior surface, he will discover by the touch that the swelling on the wrist, and metacarpus, is not caused entirely by an effusion among the softer parts; he will perceive that the ends of the metacarpal, and second row of carpal bones, form no small part of it. This, strengthening the suspicion which the first view of the case had excited, leads him to examine, in a more particular manner, the anterior part of the joint; but the want of that solid resistance, which a dislocation of the carpus forward must occasion, forces him to abandon this notion, and leaves him in a state of perplexing uncertainty as to the real nature of the injury. He will, therefore, endeavour to gain some information, by examining the bones of the fore-arm. The facility with which (as was before noticed,) the ulna can be moved backward and forward, does not furnish him with any useful hint. When he moves his fingers along the anterior surface of the radius, he finds it more full and prominent than is natural; a similar examination of the posterior surface of this bone, induces him to think that a depression is felt about an inch and a half above its carpal extremity. He now expects to find satisfactory proofs of a fracture of the radius at this spot. For this purpose, he attempts to move the broken pieces of the bone in opposite directions; but, although the patient is by this examination subjected to considerable pain, yet, neither crepitus nor a yielding of the bone at the seat of fracture, nor any other positive evidence of the existence of such an injury is thereby obtained. The patient complains of severe pain as often as an attempt is made to give to the limb the motions of pronation and supination.

If the surgeon lock his hand in that of the patient's, and make extension, even with a moderate force, he restores the limb to its natural form, but the distortion of the limb instantly returns on the extension being removed. Should the facility with which a moderate extension restores the limb to its form, induce the practitioner to treat this as a case of sprain, he will find, after a lapse of time sufficient for the removal of similar swellings, the deformity undiminished. Or, should he mistake

the case for a dislocation of the wrist, and attempt to retain the parts *in situ* by tight bandages and splints, the pain caused by the pressure on the back of the wrist will force him to unbind them in a few hours; and if they be applied more loosely, he will find, at the expiration of a few weeks, that the deformity still exists in its fullest extent, and that it is now no longer to be removed by making extension of the limb. By such mistakes the patient is doomed to endure for many months considerable lameness and stiffness of the limb, accompanied by severe pains on attempting to bend the hand and fingers. One consolation only remains, that the limb will at some remote period again enjoy perfect freedom in all its motions, and be completely exempt from pain: the deformity, however, will remain undiminished through life.

The unfavourable result of some of the first cases of this description which came under my care, forced me to investigate with peculiar anxiety the nature of the injury. But while the absence of crepitus and of the other usual symptoms of fracture rendered the diagnosis extremely difficult, a recollection of the superior strength and thickness of this part of the radius, joined to the mobility of its articulation with the carpus and ulna, rather inclined me to question the possibility of a fracture taking taken place at this part of the bone. At last, after many unsuccessful trials, I hit upon the following simple method of examination, by which I was enabled to ascertain, that the symptoms above enumerated actually arose from a fracture, seated about an inch and a half above the carpal extremity of the radius.

Let the surgeon apply the fingers of one hand to the seat of the suspected fracture, and locking the other hand in that of the patient, make a moderate extension, until he observes the limb restored to its natural form. As soon as this is effected, let him move the patient's hand backward and forward; and he will, at every such attempt, be sensible of a yielding of the fractured ends of the bone, and this to such a degree as must remove all doubt from his mind.

The nature of the injury once ascertained, it will be a very easy matter to explain the different phenomena attendant on it, and to point out a method of treatment which will prove com-

pletely successful. The hard swelling which appears on the back of the hand, is caused by the carpal surface of the radius being directed slightly backwards instead of looking directly downwards. The carpus and metacarpus retaining their connections with this bone, must follow it in its derangements, and cause the convexity above alluded to. This change of direction in the articulating surface of the radius is caused by the tendons of the extensor muscles of the thumb, which pass along the posterior surface of the radius in sheaths firmly connected with the inferior extremity of this bone. The broken extremity of the radius being thus drawn backwards, causes the ulna to appear prominent toward the palmar surface, while it is possibly thrown more towards the inner or ulnar side of the limb, by the upper end of the fragment of the radius pressing against it in that direction. The separation of these two bones from each other is facilitated by a previous rupture of their capsular ligament; an event which may readily be occasioned by the violence of the injury. An effusion into the sheaths of the flexor tendons will account for that swelling which occupies the limb anteriorly.

It is obvious that, in the treatment of this fracture, our attention should be principally directed to guard against the carpal end of the radius being drawn backwards. For this purpose, while assistants hold the limb in a middle state between prona tion and supination, let a thick and firm compress be applied transversely on the anterior surface of the limb, at the seat of fracture, taking care that it shall not press on the ulna; let this be bound on firmly with a roller, and then let a tin splint, formed to the shape of the arm, be applied to both its anterior and posterior surfaces. In cases where the end of the ulna has appeared much displaced, I have laid a very narrow wooden splint along the naked side of this bone. This latter splint, I now think, should be used in every instance, as, by pressing the extremity of the ulna against the side of the radius, it will tend to oppose the displacement of the fractured end of this bone. It is scarcely necessary to observe, that the two principal splints should be much more narrow at the wrist than those in general use, and should also extend to the roots of the fingers, spreading out so as to give a firm support to the hand. The

cases treated on this plan have all recovered without the smallest defect or deformity of the limb, in the ordinary time for the cure of fractures.

I cannot conclude these observations without remarking, that were my opinion to be drawn from those cases only which have occurred to me, I should consider this as by far the most common injury to which the wrist or carpal extremities of the radius and ulna are exposed. During the last three years, I have not met with a single instance of Desault's dislocation of the inferior end of the radius, while I have had opportunities of seeing a vast number of the fracture of the lower end of this bone.

Stephens Green, February 21, 1814.

SELECTED REVIEWS.

An Essay on the Venereal Diseases which have been confounded with Syphilis, and the Symptoms which exclusively arise from that Poison; illustrated by Drawings of the Cutaneous Eruptions of true Syphilis, and the resembling Disease. By RICHARD CARMICHAEL, M. R. I. A. President of the Royal College of Surgeons in Ireland, and one of the Surgeons of the Lock Hospital, Dublin. Part I. quarto, pp. 121, not accompanied by Drawings.

From the London New Medical and Physical Journal, for November and December, 1814.

EVERY surgeon, and every general practitioner, of any experience, must recollect, with regret and disappointment, the instances in which his skill and discrimination have been baffled by the Proteian forms of a disease, which is considered by the host of *Routinists* as so uniform in its nature and appearance, as scarcely to require a moment's examination or thought, where *any* of the general symptoms are present.

In following the steps of Hunter, Abernethy, and a few other distinguished members of the profession, Mr. Carmichael comes before the public with strong claims on their attention, since, independently of his peculiar talent for discrimination, the field of practice, in which he is engaged, must furnish the most ordinary mind with an ample store of facts for the prosecution of the investigation under review. The Lock Hospital in Dublin is supported by Government, and contains nearly three hundred patients, attended by five surgeons, who have their allotted wards; but at the same time, access to the patients and practice of the whole hospital.

"The manner in which the investigation was prosecuted, (says Mr. C.) was on the most simple plan. Whenever a primary ulcer on the genitals occurred, which was destitute of the characteristics of chancre—*the hardened edge and base*, it was treated without the exhibition of mercury; and the same system was pursued in those cases of constitutional symptoms, which had a doubtful appearance.

"*The scaly syphilitic blotch*, as described in page 129 of Willan, and the *excavated ulcer of the tonsils*, as described in page 482 of Hunter, were alone esteemed to be syphilitic, and treated with mercury.

"As to the affection of the bones, whenever a patient complained of *nocturnal pains in the shafts of the long bones, or had a decided node or enlargement of the bone*, his disease was esteemed syphilitic, and the use of mercury adopted; but if the patient merely complained of pains in the joints, or if there was any indication that the coverings of the bone only were affected by an inflammatory swelling of a doubtful character, an occurrence which was not unfrequent, the employment of mercury was postponed, until the nature of the disease manifested itself by indubitable syphilitic appearances." v. vi.

The pseudo-syphilitic diseases were accurately noted before a numerous class of pupils, and their symptoms contrasted with those of true syphilis in the clinical lectures.

The first chapter of the work comprises Observations on those diseases; for instance, Yaws, Sivvens, &c. which have been confounded with syphilis; and historical researches, relative to the existence of *venereal* diseases, prior to the importation of *syphilis* from America. That the organs of generation have been occasionally affected with disorders resembling gonorrhœa and chancres, from time immemorial, was proved by Becket, Patin, Sanchez, Lombard, and many others before Astruc, who has embodied the evidences on this subject with considerable labour. That they were essentially different, however, from the trans-atlantic infection, is sufficiently obvious, from the circumstance of their either admitting of a natural cure, or of their giving way to medicines without any mercury, which is the reverse of what we know to be the case in real syphilitic affections. We shall, therefore, pass over this part of our author's work, and dwell more on the practical chapters, considering as much as possible the information therein contained, for the sake of those readers whose circumstances or situations debar them from access to valuable, but expensive publications. This is a consideration too generally neglected by the Reviewer, who fritters away a great proportion of his pages in idle declamation or useless hypercriticism,

without taking much pains to convey the results or practical deductions of his author, to the mind of his disappointed reader. We have been guided of late, by convictions of the importance of this procedure; and we pledge ourselves for a conscientious discharge of the task we thus impose upon ourselves—a task of more difficulty, and occasioning more labour, than is generally imagined; for it requires the most careful perusal of any work, to be able to give a concentrated view of its contents, *in the language of the Reviewer*, a sine qua non in the plan proposed, since long or frequent quotations are incompatible with the object in question.

Having, then, adduced sufficient testimonies, from the writings of ancients and moderns, of the existence of pseudo-syphilitic diseases, Mr. C. enters, in his second chapter, on "the local and constitutional symptoms of syphilis, mode of treatment, and action of mercury upon the system."

He commences with recommending Mr. Hunter's description or definition of chancre, to be engraven on the mind of every medical man, as he considers the "thickened edge and base," and the *abrupt termination* of the hardness and thickening in the surrounding parts, to be diagnostics of great importance.

"Ulcers," says he, "which are *not* syphilitic, may, but seldom have, a fullness and slight induration round the circumference;" but then the induration does not "terminate abruptly, but diffuses itself gradually and imperceptibly into the surrounding parts." p. 25.—"The induration of a chancre is not confined to the edges only, but extends under the entire surface of the ulcer," "which makes but slow progress, compared to those ulcers of the parts of generation, which are destitute of any surrounding induration, and particularly the phagedenic and sloughing ulcer." p. 26.

In the next paragraph, however, there is some obscurity, that may lead to what we conceive to be a wrong treatment.

"In the treatment of chancre," says Mr. C. "we should not desist from the exhibition of mercury, till the entire of the surrounding induration is absorbed. And when this is accomplished, if the system has felt the full influence of that mineral, the ulcer may be allowed to cicatrize. As soon as the

action of the poison is superseded, the parts will evince a disposition to heal, if not prevented by an indiscreet *perseverance* in the use of the remedy." ib.

Now we have observed, in no trifling field of practice, that when the induration is absorbed, and "the parts evince a disposition to heal," a *perseverance* will not prevent the completion of the cure; but, on the contrary, is necessary, till the sore is healed for some time.

If Mr. C. means an injudicious *administration* of the remedy, we can understand him; but the mere *perseverance* does not deserve the stigma conveyed in the foregoing paragraph.

A case is next introduced, to show the progress and appearance of chancre, when left to its natural march; and it is somewhat curious, that a periodical change of appearance is then perceptible. "Its livid surface is alternated every third or fourth day with that of a light brown or tawny colour." p. 27.

Mr. C. describes, with accuracy, the appearance of chancre, as it affects the body of the penis; and justly observes, that its dark, livid hue renders it liable to be confounded with, and mistaken for, a *sloughing ulcer*. The latter will be found, however, to want the hardened edge and base of chancre, and its progress will be infinitely more rapid than that of true syphilitic sores. Mr. C. considers phymosis and paraphymosis as less frequently attendants upon chancre than upon pseudo-syphilitic ulcers, and that they are ascribable to irritability of constitution, when they accompany the former complaint. Mr. C. wisely puts us on our guard, against the exhibition of mercury, when the inflammation is violent, and the penis considerably swollen and painful. On the contrary, he prescribes venesection from the arm, rest, cooling laxatives, and the strictest antiphlogistic regimen. He has not found *local* blood-letting so useful here as in other inflammations, "for if the matter which flows from beneath the prepuce, should come in contact with the wounds inflicted by the leeches, troublesome sores might ensue." p. 30. We lately had occasion to observe the violent inflammations produced by chancres on the body of the penis, among our soldiers and sailors in the South of France, in many cases of which we were unable to commence

the mercurial treatment for some weeks. Indeed, the symptoms were infinitely more severe, in almost every case of chancre which occurred in France, than under similar circumstances in England; and we are strongly disposed to acquiesce in the opinions lately delivered to the public by Dr. Fergusson, in the Medico-Chirurgical Transactions. Mr. Carmichael *conjoins* mercury with depletion.

"I early conceived," says he, "that active depletions might be conjoined with the use of mercury, in those cases of combined inflammation and chancre, with the view of subduing, in the most effectual manner, this dangerous combination of disease; and I adopted and pursued this practice with the most unvarying success." p. 30.

We have never considered the delay occasioned by the depletory measures, as of any consequence, and therefore deferred the mercurial treatment till the inflammatory symptoms had subsided; but we give implicit credence to the assertions of Mr. C. from our knowledge of the utility of mercury in inflammations of still more vital organs than the genitals; and we regret, that the dogmas of the schools have withheld us from pursuing the plan recommended by our author.

At page 46, Mr. C. adverts to a circumstance which we have often witnessed, viz. the formation of matter under the investing ligament of the penis, accompanied by enormous tension, pain, and induration. In these cases, as in deep seated paronychia, the only effectual mean of relief, is an incision through the resisting ligament, to give exit to the matter; otherwise, the worst consequences may ensue.

Knowing, as we do, the extreme difficulty of removing venereal warts, we gladly introduce the following remedy, upon such respectable authority as that of our author.

"The idea of applying *acetic acid** to warts, was first suggested by a knowledge of its extraordinary effect upon those well-known indurations of the cuticle, called corns, which it will remove, with certainty, in one or two applications; and if not carefully managed, all the surrounding cuticle which it happens to touch."—p. 37.

*Of The Dublin Pharmacopœia of course. Rev.

He only recommends the application to *large warts with broad bases.* The pendulous, with narrow necks, he advises to be removed with scissars, and a solution of lunar caustic applied to the raw surfaces, after the oozing of blood has ceased.

Mr. C. acknowledges the impossibility of distinguishing syphilitic buboes in the groin, from those that arise from other causes, except by a consideration of preceding circumstances. He does not believe, that syphilitic bubo can take place, without a previous chancre; and it is rather strange, that he expresses himself in the very words of Adams, when he says, he has never had cause to repent the omission of mercury in those cases.

Respecting the constitutional symptoms, Mr. C. informs us, that he has not in any one instance, observed the eruption on the skin to be "papular, pustular, or tubercular, when it arose from the true syphilitic primary ulcer; or to be *scaly* when it followed those ulcers which do not possess the true characters of chancre, the indurated edge and base."—p. 40.

Our author accords with Mr. Hunter's definition of syphilitic ulcer in the throat, viz.

"A fair loss of substance; part being dug out as it were from the body of the tonsil, with a determined edge, and is commonly foul, with thick white matter adhering to it, like a slough; which cannot be washed away." "He considers all ulcers, not agreeing with the above, to be at least doubtful, and requiring a strict examination of circumstances previous to the administration of mercury. In regard to nodes, he considers the *syphilitic* as a solid enlargement of the bone, unaccompanied at its commencement, or for some time afterwards, by any discoloration of the integuments; whereas, the pseudo-syphilitic nodes affect the periosteum and soft parts covering the bone, and not the bone itself; as there is, from the commencement, swelling and redness of the integuments, which rise suddenly, increase with rapidity, and frequently disappear as quickly as they arose, without the intervention of mercury." —p. 45. "Syphilitic pains affect the centres of the long bones; pseudo-syphilitic more commonly affect the joints; but all have the nocturnal exacerbation. The secondary, or constitutional symptoms in the *soft parts*, experience a rapid amelioration

under the influence of mercury, and, in short, yield more readily than the primary or chancreus ulcerations."—p. 46.

Mr. C. considers it unnecessary, even in the most obstinate instances, where the bones are affected, to continue a full mercurial action longer than two months. "This period is more than sufficient to supersede the syphilitic action, if the course is managed with judgment."—ib. In this we cannot entirely coincide with our author, since we have found it necessary, with every care and attention, to continue a mercurial action for a longer period than that alluded to.—We entirely agree, however, with Mr. C. in the following sentence:

"Whatever be the quantity, [of mercury] it is necessary for the cure of syphilis to excite a strong mercurial action, and to make the constitution feel and suffer under the debilitating effects of the mineral. Alterative courses, as they are called, may suspend, but will seldom supersede the poison altogether." —p. 48.

We have but too many opportunities of witnessing the justness of the following remarks. Speaking of the mercurial phagedenic,

"These circumstances," says he, "are elucidated by the progress of ulcerated buboes, in which the mercurial phagedenic more frequently occurs, than in any other venereal ulcer, on account of the practice of opening them, while the system is mercurially affected. The crude wound inflicted by the lancet in opening them, if the system is affected with mercury, will immediately assume the mercurial phagedena, which will rapidly extend, although a sufficient quantity of mercury has not been exhibited, to supersede the mercurial irritation in the part. The same circumstances will occur in the suppurating sore made by caustic; and in either case, we have an instance of mercurial action in one portion, and of venereal action in another portion, of the same ulcer."—p. 49.

Mr. C. found that females were more easily brought under the influence of mercury than males, and, therefore, it is his practice to commence with half a drachm of the ointment every night; whereas, a drachm may be employed on the more robust sex. It must be recollected, however, that the mercurial atmosphere of a Lock Hospital has a considerable effect on a pa-

tient, and particularly a debilitated female. Mr. C. justly observes, that

"When a patient, whether male or female, has been salivated several times, and the system thereby habituated to mercury, it is incredible the small quantity of that mineral, that is sometimes capable of exciting the severest effects."—p. 52.

Our author warns us against a perseverance in a mercurial course, in broken constitutions, where œdematous swellings of the legs have begun to manifest themselves, as ascites and hydrothorax have often rapidly come on in consequence. Country air, generous diet, and regulated exercise are the best remedies in these distressing cases, omitting entirely the administration of mercury till the constitution is renovated.

In cases where dropsy has actually taken place,

"Nitrous acid, given in as large quantities as the stomach and bowels can bear, conjoined with digitalis, is of the greatest service."—p. 53.

Cases illustrative of these remarks, are adduced by our author, from page 53 to 58.

In the third chapter the grand subject of the work is entered upon, viz. first class of primary diseases, which have been confounded with syphilis. This class comprises four species,

"1st. Superficial ulcers without induration, but with elevated edges. 2d. Similar ulcers without induration or elevated edges. 3d. An excoriation of the glans and prepuce, attended with purulent discharge. 4th. Gonorrhœa virulenta."

The constitutional symptoms arising from these affections are alike in all. In the 2d class, Mr. C. places the phagedenic and sloughing ulcers, the constitutional symptoms of which are materially different from those of the first class. Mr. C. thinks, that at least five cases of these pseudo-syphilitic complaints occur for one of a true venereal character.

In the treatment of the first species of ulcers, our author places his chief reliance in the constant application of astringent washes; viz. one grain of muriate of mercury to an ounce of lime water. Buboes sometimes arise from this species, and are obstinate. Mr. C. treats them with decoction of sarsaparilla and antimonials; in illustration of which treatment, some cases are inserted from page 63 to 67.

The second species of ulcer is the most frequent of any, is raised above the surrounding skin, and exhibits a smooth surface. It often occasions phymosis, and is cured by the same lotion as the former, conjoined with decoctum sarsæ and antimonials. We shall subjoin a case as an example.

"William Lucas, October 26, 1813. There was an ulcer, the size of half a crown, situated on the prepuce; it was superficial, smooth, and without induration. The prepuce was considerably swelled, and he was affected with ardor urinæ, and gonorrhœa. He stated, that he was three weeks disordered, and had not used mercury. The antimonial solution was ordered to be taken, and poultices of bread and water to be applied.

"On the 2d of November, the swelling and pain were removed; and he was desired to inject frequently, into the urethra, a lotion, composed of two grains of muriate of mercury to eight ounces of lime water, and to keep dossils of lint, moistened in the same application, to the ulcer. 15th, The ulcer was healing, and the discharge and ardor urinæ were entirely removed.

"November 29, The ulcer was healed, but he remained in the hospital till the sixth of December, when he was discharged well."—p. 70.

The third species, viz. Excoriation, need not detain us, as few would apply mercury on such occasions, or be mistaken in the nature of the complaint. Mr. C. uses the same external applications as in the former cases.

The fourth species, Gonorrhœa Virulenta, is considered by our author, as we believe it is by most modern surgeons, to be produced by a poison totally different from that of syphilis. Mr. C. endeavours to solve the difficulty, and set at rest the long agitated question, by supposing that excoriations and gonorrhœa are the result of the same poison, since the constitutional as well as the local effects are the same, and since the one frequently gives rise to the other.

"In regard to the treatment of gonorrhœa on the plan I have recommended, it may be necessary to mention, that if the inflammation should be considerable, and the ardor urinæ severe, it might be improper to employ any injection, as even the point of the syringe will, in some cases, excite irritation;

but there are few instances of gonorrhœa, even in the first stage, in which the injections I have recommended [muriate or submuriate of mercury and lime water] will not effectually ease the ardor urinæ, lessen the discharge, and in a very short time remove the disease altogether."—p. 78.

Mr. C. acknowledges the inefficacy of those injections composed of the acetates of lead and sulphates of zinc, which we have found useless, if not prejudicial. We agree with him, however, that strictures in the urethra are often placed to the account of injections, when they were produced by gonorrhœa itself.

Having thus given a pretty full view of our author's observations on the first class of pseudo-syphilitic affections, we shall defer the consideration of the "Constitutional symptoms" till our next number; in the mean time it will be sufficiently evident, even in this early stage of the Review, that we consider the work before us of no ordinary merit; and that its author is likely to enhance the high reputation which the School of Surgery has already obtained in the sister island.

If it be true, that "a great book is a great evil," it may also be acknowledged, that a good book is a real blessing; particularly at these times, when the weeds of medical literature threaten to overwhelm the useful grain by their rank luxuriance. When from the apothecary's apprentice, who can scarcely get behind his own counter, before he commences author, and dispenses his pharmaceutical or physiological *learning* for the good of society and the edification of the profession, up to the metropolitan doctor, who puffs himself into notice by the extraordinary cures which he performs on incurable diseases, all ranks are infected with the *cacoethes scribendi*, and all are pouring through the groaning press their crude and self-interested lucubrations on a disgusted public! In such times, it need not excite surprise, if the ill-fated critic protracts, as long as possible, the hour of separation from a work of genuine merit, and lingers through an *Oasis* with tardy steps, when the greater part of his journey lies through the sterile tracts of literature.

The more we have examined the work before us, the more

we have compared it with past and present experience, the higher in our estimation does the author of it stand, and the more conscientiously do we recommend it to the perusal of the faculty.

All the higher classes of the profession will consult the work in its original; and we shall endeavour to disseminate its information still farther, by bringing a condensed portrait of the subject and outline of the practice, within the reach of those who must depend on the sources of periodical publication for recent improvements or discoveries in the profession.

"The CONSTITUTIONAL SYMPTOMS, says Mr. C. which arise from the superficial ulcer that is *without elevated or indurated edges*, and the constitutional symptoms which are derived from the *excoriation of the glans and prepuce, attended with purulent discharge*, and from *gonorrhœa virulenta*, I have already stated to be alike in all those complaints. They consist of more or less fever, which ushers in a *papular eruption*, inflammation, and soreness of the fauces, attended with difficulty of swallowing; severe pains, which affect the head and larger joints, and sometimes inflammatory swellings over the superficial bones, which many would distinguish by the name of Nodes."—p. 81.

Our author asserts, that these disorders, in all their stages, differ as widely from the secondary symptoms of real syphilis, as the primary affections do from the primary symptoms of true venereal. He observes, that the fever which ushers in the eruption is, in general, strongly marked, and attended with quick pulse, white tongue, and severe pain in the head, shoulders, hips, knees and ancles. To these, some anomalous symptoms are added in a very few individuals.

"The fever does not subside on the appearance of the eruption, though it is at its height just previous to that event; it exists as long as fresh crops of the eruption continue successively to appear, and is usually accompanied with pains of the several joints, which are most severe at night."—p. 82.

Mr. C. remarks, that in every instance except two, where there was eruption, it was of the *papular* form and genus lichen, or as Willan defines it—"an extensive eruption of papulæ, connected with internal disorder, usually terminating in scurf,

recurrent, not contagious." These varied in appearance, from a pale red to a deep crimson, some merely pimples, others almost advanced to the pustular form. The time of the appearance of this eruption after infection, varies much, as in syphilis; in a few cases, Mr. C. observed it take place in four or five weeks after infection. The papulæ, which, in general, are most numerous on the face, back, and belly, do *not* make their appearance together, but in succession.

"Their colour, in the latter stages, becomes paler, and assumes a copper tint, while the exfoliation of the cuticle gives an appearance of scaliness, an appearance which is most liable to be confounded with the scaly eruption of syphilis. But the very appearance of the declining papulæ, will, to a discriminating eye, be sufficient for this purpose; for its copper-coloured scaly surface is *more raised in the centre than its circumference*, while the reverse is the case in the scaly leprous eruption of syphilis."—p. 83.

In all cutaneous diseases, as Dr. Bateman has observed, there is a tendency to affections of the throat and eyes; so in the complaint under consideration, soreness of the throat is one of its most frequent constitutional attendants. It is widely different, however, from the *excavated* ulceration of the tonsil, in syphilis, where difficulty of deglutition is seldom complained of. Here the patient suffers considerable pain and difficulty of swallowing; and on examination, the whole of the fauces, but particularly the back part of the pharynx, will exhibit a raw, inflamed, and excoriated appearance, covered with a whitish, slimy, adhesive matter.—p. 84.

In those swellings over the tibia, which might be mistaken for nodes, there was more of an inflammatory character, and the coverings of the bone only were affected. They were also sudden in their appearance.

"The eruption, after having entirely declined, will return again and again, at uncertain intervals of from one to several weeks; each successive crop, however, being less than the former, and attended with less constitutional derangement. The intervals between those attacks are also greater, as the disease exhausts itself, or yields to the powers of the constitution. But if the progress of the disease has been interrupted by mercury,

before it has arrived at its latter stages, it becomes more obstinate and complicated than it otherwise would have been."

If mercury is exhibited during the inflammatory stage, where there are severe pains of the joints, that require venesection and antiphlogistic measures, the patient is generally rendered much worse, and the pains are increased. If, however, the exhibition of mercury is postponed till the eruption has begun to decline, it will, in most instances, disappear under its use, and the pains, though not removed, will be alleviated thereby. After this, another crop of pustules, with sore throat, &c. will succeed, but in a milder degree, till the disease wears itself out.

"My mode of treating the constitutional symptoms of those disorders, is, with little variation, the same as that employed for the primary symptoms. If, however, the fever is considerable, as was frequently the case, the pulse being often upwards of 100, full, and strong, with furred tongue, attended with severe pain of the joints, I never hesitate to order blood-letting to twelve or sixteen ounces; and I seldom fail to find that this measure is attended with the same benefit as would follow its adoption in acute rheumatism. The blood appears highly buffed; the pains are considerably mitigated, but a repetition of the venesection is frequently required. It will also be necessary to pay attention to the state of the bowels, and endeavour, by means of antimonials, to promote perspiration, and lessen the increased arterial action of the system. When the febrile symptoms are reduced, I combine the simple or compound decoction of sarsaparilla with antimonials. Although I seldom or never exhibit mercury in those diseases, yet I would not altogether decline its use; but it should only be adopted at a time, when the disease has nearly exhausted itself. The mercurial salts, in alterative doses, in conjunction with sarsaparilla, are to be preferred to frictions."—p. 86, 87.

Our author sums up the general treatment of these disorders in the following words.

First, to moderate the action of the system, if the fever, which attends and accompanies the eruption, should be violent. Second, after the fever is subdued, to promote the secretions, and strengthen the system by vegetable tonics (such as sarsaparilla, &c.) and nutritious aliment, taken in proportion to the

digestive powers of the patient; warm clothing, moderate exercise, and a pure atmosphere. Third, when the eruption has declined, but the patient still complains of lingering pains in his head, elbows, hips, or knees, and it appears that the disease is nearly exhausted, it may be subdued altogether, by alterative doses of some of the mercurial salts, conjoined with the vegetable decoctions, without interdicting the patient from the advantage of enjoying exercise in the open air."—p. 87.

We shall now quote two or three cases illustrative of the foregoing observations; and first, a case of constitutional symptoms, arising from "*the superficial* ulcer without induration or elevated edges."

"Patrick M'Guiness, admitted January 7, 1812, on account of a small superficial ulcer on the prepuce, without any surrounding induration, and a large tumour in the right groin containing matter. He stated, that the ulcer appeared three weeks before his admission, and the tumour of the groin a week after the ulcer. I put him on the use of nitrous acid, and directed him to poultice his groin.

"January 25th. The ulcer of the prepuce had healed; the bubo had ulcerated; and the enlarged gland was projected through an opening in the skin, forming an ulcerated tumour of considerable size.

"Feb. 6. A thick eruption of small papulæ, of a dark red colour, and similar in all respects to those represented in plate ii, fig. 6, had appeared on his face, neck, and shoulders, attended with considerable fever, and severe pains in his shoulders, elbows, knees, and ancles. He also complained of soreness in his throat, and difficulty of swallowing. On examination there was not any ulcer, but a general inflammation of the fauces, and a peculiar raw and excoriated appearance of the back of the pharynx. He was directed to discontinue the nitrous acid, and to take the antimonial solution.

Feb. 22. The eruption continued; many of the spots, after forming minute pustules in their acuminated tops, had declined in exfoliation of the cuticle, while fresh papulæ, at the same time, appeared in other parts. He complained of the severity of the pains, particularly in his knees, which shot along the muscles of his legs, but he did not complain of any pain affect-

ing the tibia. His pulse was 112, with considerable thirst and restlessness. I directed that twelve ounces of blood should be taken from his arm, and the antimonial solution continued. The blood taken was buffed and cupped, and he felt considerably relieved after this depletion.

"On the 1st of March, he was directed to take decoction of sarsaparilla, in conjunction with the antimonial solution, the febrile symptoms having nearly subsided. Before the 8th, the eruption had every where declined; and in some places, disappeared. He still complained of the pains in his joints, which, however, were considerably alleviated. As a remedy for these, I directed fifteen grains of the pulv. ipecac. comp.; the decoction to be continued, and the tepid bath to be daily employed. Under this plan, his pains were soon removed, and the eruption disappeared, leaving the skin discoloured with indistinct red marks; the ulcer of his groin had also healed, and he was discharged the hospital on the 15th of March, apparently well.

"On the 1st of May, he again returned to the hospital, complaining of severe pains in his joints, and an eruption of papulæ on his arms. His pulse was 110, with thirst and general fever. He stated, that since he left the hospital, he was exposed to the inclemency of the weather, and that he had been affected with three several crops of the eruption, accompanied with pains resembling those of rheumatism. I directed that he should be bled to sixteen ounces, and that he should take the antimonial solution. The blood taken from his arm was thickly buffed. His pulse was next day reduced to 90, and the pains considerably alleviated.

"10th. The eruption had declined, and there had not appeared any fresh spots. He stated, that his hair was falling off, a circumstance that was noticed fifty or sixty years after the introduction of syphilis, as a new symptom of that disease. Yet this certainly was *not* syphilitic.

"17th. His ancles were swelled and painful, and as I conceived that the influence of this morbid poison was nearly exhausted, I did not hesitate to order alterative doses of calomel, which I combined with antimonial powder. Of those medicines, he took, in the form of pills, half a grain of calomel and three grains of antimonial powder, three times a day.

Under this plan, his pains were relieved, and his complaints to all appearance removed, and he was discharged the hospital on the 7th of June, with an injunction to return, if he should again suffer any relapse of his disorder; but he has not since returned."—p. 90.

The following case of constitutional symptoms, arising from "*excoriation of the glans and prepuce, attended with purulent discharge, and frequently with gonorrhœa,*" will conclude our review of Mr. Carmichael's work, so far at least as is published.

"Thomas Trainer, admitted December 23, 1812. His complaints were phymosis and purulent discharge from the glans and prepuce, an ulcerated bubo in the right groin, and an incipient bubo in the other. There was also considerable swelling and thickening of the scrotum, but the testicles were of their natural size. He stated, that he was four months disordered, and that the first symptom with which he was affected was gonorrhœa, and that the other complaints shortly afterwards succeeded. I directed the antimonial solution, and the lotion of calomel and lime water.

"28th. The discharge and swelling of the penis were entirely removed; on retracting the prepuce, the parts were free from ulceration. The ulcerated bubo was healing, and that of the other was declining fast. The swelling and thickening of the scrotum was also considerably lessened. He complained, however, of severe pains in his joints, particularly at night.

"January 12, 1813. The swelling of the scrotum had again increased, and he complained of soreness in the throat. On examination, the back of the pharynx appeared raw and excoriated; and the velum and uvula swelled and relaxed. I directed the decoction of sarsaparilla, in conjunction with the antimonial solution.

"15th. An eruption of papulæ broke out all over his body, attended with high fever, pain in his chest, and difficulty of breathing. The scrotum and penis were very much swelled, and the prepuce so much swollen, as to resemble a bladder of water. The soreness of his throat was increased, and the pains of his joints had become more severe. I directed that he should be blooded to sixteen ounces, and the antimonial solution to

be continued without the sarsaparilla. On the following day, his fever seemed considerably diminished, and his breathing was free. There appeared numerous small ulcers on the scrotum, which were probably the papulæ altered in appearance by the friction." From this time he convalesced, and recovered rapidly.—p. 102.

The plates to both parts will accompany the second part, and their loss is felt by the readers of what is already published.

To Mr. Carmichael we offer our thanks, for the pleasure and instruction his volume has afforded us, and we shall be happy to peruse the remainder of his work, and contribute to the dissemination of its practical information.

Elements of Medical Jurisprudence; or a succinct and compendious Description of such Tokens in the Human Body as are requisite to determine the judgment of a Coroner, and Courts of Law, in Cases of Divorce, Rape, Murder, &c. To which are added Directions for preserving the Public Health. By Samuel Farr, M. D. 12mo. pp. 139. 1814.

[From the London Medical and Physical Journal, for October 1814.]

The title of this little volume sufficiently proclaims its object: and we hope its appearance may excite in the practitioner an attention to a most important and much neglected study. Whether we look upon the science of medical jurisprudence in its connection with the actual practice of medicine, or as one of the accomplishments of medical education, without which it cannot be said to be complete; it will be found highly deserving of our regard; but in the former point of view alone, it is a duty imperative on the practitioner to make himself acquainted with it to its fullest extent. The physician or surgeon is often called upon to make depositions in courts of justice respecting the cause of death under particular circumstances: should he err on one side, the existence of a fellow-creature may be forfeited through his ignorance; by a mistake on the other, the guilty may be absolved, and the purposes of justice defeated. How mortifying the situation of the practitioner,

who, called as a witness on a trial, is unable to explain what is required of him, or delivers his evidence contrary to the dictates of science! Exposed to the buffetings of hostile counsel, his stupidity is soon brought to light; he retires an object of derision with the whole court, with a stain upon his character that the grave will scarcely efface! Setting aside, however, the personal interest we have in an intimate acquaintance with this science, can no case arise in which life may be endangered by our ignorance of it? We fear many such instances could be found: one occurred within our own recollection, where an individual narrowly escaped being hanged upon the testimony of *several* medical men of eminence in Liverpool; and certainly would have paid the forfeit of his life, had it not been for the providential and unexpected interference of Dr. Carson, of the same place.

As no arguments we can adduce can have so much weight as this solitary fact, we shall call the attention of our readers to the particulars of the case; to which we shall subjoin another, which occurred in our own private practice, which strikingly proves the correctness of Dr. Carson's reasoning upon this subject.

A Mr. Angus, of Liverpool, was indicted for the murder of Miss Burns, a young woman with whom he lived in habits of stricter intimacy than prudence or modesty could justify. She became pregnant, miscarried, and died in a few days. The concealment of the delivery, and subsequent death, induced a suspicion that abortion had been produced by means of poison: and unhappily, on examining the body, *an opening or supposed ulceration was discovered in the posterior part of the stomach*, which was pronounced by gentlemen of eminence to be capable of explanation in no way but on the supposition of poison having been administered. Marks of inflammation were seen on the peritoneum, small intestines, *and also on the peritoneal covering of the uterus;* which last, being of the size of a bullock's heart, left no doubt of the very recent delivery of the deceased. By some unlucky fatality, the inflammation of the uterus excited no suspicion that all the mischiefs which terminated in death had there begun; upon the evidence of these gentlemen the unfortunate man was committed to goal, on sus-

picion of being the perpetrator of this atrocious deed; and, after an imprisonment of six months, was arraigned for the murder. When the trial came on, it should be mentioned, to the honour of Dr. Carson, that he alone stood forward and maintained, in opposition to his brethren, that the appearance of the stomach could be accounted for by the known fact of the occasional digestion of that viscus by the action of the gastric juice after death. And to this conflicting testimony of men of equal reputation, Mr. Angus was indebted for the preservation of his existence.

We should be sorry that any remarks of ours could merit the imputation of personality; but we are constrained to observe, that the evidence, levelled at this unfortunate man's life, was given in oppposition to facts which ought to have been notorious to every one. If the instances of digested stomach, related by John Hunter,* were in the estimation of these mistaken witnesses not sufficiently analogous with the appearances of that viscus in the case of Miss Burns to warrant the entire exculpation of the prisoner, in a matter of such serious importance, the *great* uncertainty of all medical reasoning should have induced them to *admit that uncertainty* in giving their testimony against him. Each party used Mr. Hunter's words to prove the fallacy of the other's reasoning; but neither seemed perfectly to understand him. Dr. Carson, by continually keeping alive the question concerning the stomach, contrived to keep that of the uterus out of sight. But his opponents were so little prepared for his objections, that they never could rally with sufficient firmness to direct the whole attention of the court to the state of the uterus.†

Without examining the question of the prisoner's criminality in having procured the abortion, we cannot entertain a doubt that the supposed ulceration of the stomach could not have been produced by the direct action of poison. If, from future observation, a connexion between inflammation of the abdominal viscera and the digested state of the stomach be shown

* This subject has been admirably illustrated by Dr. Adams, in his Essay on Morbid Poisons.

† For a most important investigation of this case, see our 21st volume, page 336.

to exist, it may then become a consideration whether the inflammatory symptoms were produced by the operation of poison, or the delivery itself, under all the disadvantages attendant on its concealment. That the ulceration was quite independent of poison, we think will be satisfactorily proved by the following case.*

Thyrsa Binden, aged twenty-six, residing at No. 43, Great St. Andrew-street, was delivered of a male child, after a natural labour of six hours. Until the fifth day of her confinement she was as well as under ordinary circumstances, when she began to complain of pains in the abdomen. A neighbouring apothecary was employed, who considered the symptoms to be common colic; but thought so lightly of them, that he merely ordered a common fomentation, and gave a powder, supposed to be an antimonial preparation. On the third day from this attack, the pains having increased to an insupportable degree, another apothecary was sent for, who recommended an accoucheur to be consulted, when Mr. Clarke was called in, who ordered a large quantity of blood to be drawn from the arm. It was immediately done. In the evening the symptoms were evidently increasing, though at first relieved by the bleeding. We were now sent for. She complained of the most excruciating pain of the abdomen, with inability to sit in an erect posture. The surface of the body was so exquisitely tender, that the slightest pressure could not be borne, nor could she move herself without the most alarming increase of her sufferings. Her skin was hot, she had intense thirst, the pulse was full, quick, and undulating, and the tongue was covered with a whitish fur. She had taken a solution of sulphate of magnesia in mint-water, which had procured the necessary evacuations from the bowels.

Here was no time to be lost; and, well knowing the liberality of our predecessor, Mr. Clarke, we ventured to wave the etiquette of the profession, which made it proper for us to consult with him, previous to prescribing in this case. Thirty ounces of blood were ordered to be taken, and the abdomen to

* Mr. Want thinks it proper to acknowledge himself to be the writer of this article, that the public may judge how far the authenticity of the case may be relied on.

be kept constantly wet with cloths dipped in vinegar and water. No internal medicine was administered. In the early part of the night she was relieved; the lotion appeared to be serviceable while applied, but, from an unlucky though natural fear of checking the discharges which are peculiar to the puerperal state, they were laid aside, and no permanent benefit was experienced. The symptoms recurred in the night with their usual violence: on the following morning the bleeding was repeated, and the nurse being convinced of the necessity of reapplying the lotion, it was done. About noon she was evidently relieved. Mr. Clarke met us in consultation, and it was agreed to continue our present plan. In the evening she was free from pain; the lotion had been kept constantly applied; she spoke of it as being peculiarly grateful to her, and believed it in a great degree to have been instrumental in procuring the ease she experienced. She was now sanguine in her expectations of recovery; but there was a fixedness and anxiety in her countenance which left us little to hope. The breathing became so laborious as to render it necessary to support her in an erect position by pillows. In the morning the pulse became weaker; convulsive twitches of the tendons supervened; she was evidently sinking, and in the evening she died.

It should have been remarked, that no vomiting had taken place during any part of her illness. With some little difficulty we obtained permission to inspect the body after death. On dissection, marks of high inflammation were evident in the peritoneum and the external coats of the intestines, which were slightly connected together by a gelatinous substance, but were easily separable; the surface of the intestines were covered by pus, a large quantity of which was found in flakes floating in about a pint of fluid effused into the cavity of the abdomen; water was found in the chest and pericardium; but the appearances most important for our purpose, were those which presented themselves in the stomach: *the posterior part of that viscus was completely eroded, and the contents effused into the abdomen immediately behind it.* Patches of inflammation were also found both on its internal and external surfaces. The uterus was inflamed, and had not yet contracted to its natural size.

The slightest comparison of this case with that of Miss Burns, as related in evidence upon the trial, will abundantly satisfy the reader of their being as similar as two cases in different constitutions of body can well be supposed to be; both young women, dying within a few days after delivery, with symptoms of peritoneal inflammation, and both with *digested stomachs after death.**

In one respect only they differ; in our case, which was open to the inspection of the whole world, no possible suspicion of poison could exist. In the other, probably the concealment of the delivery gave rise to the suspicion. Let us hence learn the danger of stepping aside from the abstract question presented to our decision, with the hope of obtaining assistance from collateral evidence, which is at best to be suspected, and certainly ought never to influence the judgment of the practitioner.

With regard to the merit of the publication before us, although it is calculated to impart much instruction to the uninformed reader, we cannot allow it to possess that degree of perfection which the present state of science would entitle us to expect; in many places it contains sentiments evidently erroneous, especially where the grounds of divorce are discussed; and the important question of the digestion of the stomach is left entirely unnoticed. We are happy to be enabled to add, that some recent arrangements at the Windmill-street Theatre may be the means of directing the attention of students in medicine to the study of this interesting science, as Dr. Richard Harrison has announced his intention of delivering a full course of lectures upon it.

The contents of this Epitome are arranged under nine heads: —Pregnancy—Parturition—Divorces—Rape—Murder of Infants—Homicide—Idiotism and Insanity—Impostors—means of preserving Public Health. As the work is in itself much condensed, and scarcely capable of abbreviation, we shall, for the purpose of showing the nature of its execution, make some selections from three of these chapters.

* These may be regarded as very important facts in pathology, and may lead us more closely to investigate the seeming connection between the inflammatory symptoms and the state of the stomach. But we dare not dwell upon this, as it is foreign to our present subject.

"When the word parturition relates to the child itself, it may denote the time when it is born, the conformation of its parts, or the external figure which it presents, the state of its life, and the number which are brought into the world.

"When it relates to the time in which it is born, it may be considered either as perfect or mature, or immature and imperfect. The former, when gestation has been carried on at least nine months: the latter, when it is completed before that time; and in this last case, another division may be made into abortions, where the delivery is made before the seventh month; and premature births, where the child is born between the seventh and the end of the ninth. To this head also belong too late deliveries.

"The signs of an immature child are taken from the following particulars:

"1st. From its length, for, if it be not one foot long, we may be nearly certain that it is not completely formed.

2d. From its weight, which should exceed five pounds.

3d. From the figure of the head, &c. An incomplete child has a deformed face resembling an old person, with a wide mouth and slender ears like membranes; its eyes are shut; the hair of its head is of a whitish cast; the division between the bones of the skull, called the rhomboidal suture, gapes wide; the bones themselves are moveable; and the lips of the mouth resemble pieces of bloody flesh.

"4th. From its habit of body, which is for the most part thin and tender, and covered with a short down, and is of a reddish hue, particularly on the extremities and the face. If it be a male, the scrotum is of a round figure, and the testicles are not contained in it.

"5th. From its limbs, which are thin and weak, and the nails upon its fingers are soft, short, not extending beyond the fingers; nay, if it be very small, as of one or two months, the nails are by no means perceptible either upon the fingers or the toes.

"6th. From the conformation or constitution of its bones; for it is evident from experience, that in every month of gestation there is some alteration in this respect; ex. gr. in a fœtus of five months, the orbits of the eyes are entirely formed into

bony sockets; and in one of seven months, the small bones, subservient to the organ of hearing are so perfect, as scarcely to differ from those of a complete child.

"7th. From the umbilical cord, which is very slender.

"8th. From other curious circumstances which attend this little embryo, such as a constant indulgence in sleep, an abstaining from crying, an intolerance of cold, an indisposition to suck, or to use its limbs, or the muscles of other parts, such as those which are subservient to the evacuation of urine, or the depositing of the meconium.

"The signs by which we distinguish a perfect child are taken,

"1st. From its size; its length being at least one foot six inches.

"2d. From its weight, which should be at least six pounds.

"3d. From the formation of its bones, which is known only by experience. But in general, a child can hardly be called complete, all whose bones, and every part are not entirely formed, though age may give some addition to their substance.

"4th. From the umbilical cord, which is thick and firm.

"5th. From other circumstances, opposite to those in that which was imperfect; such as that he cries, moves his limbs, opens his eyes, sucks at the breast, is not always asleep, can bear cold, has a white skin, can evacuate urine and the fæces, has long nails, and his head covered with hair.

"That which relates to the conformation of a child, after it is brought into the world, is distinguished into monstrous and not monstrous: the former including all deviations from the ordinary figure of man. Monsters are again divided into perfect and imperfect. A perfect monster is that which absolutely differs in all its parts, from the human appearance, as when it resembles any brute animals, as a dog, an ape, &c. An imperfect monster is where only a partial alteration is made in its figure; and this may again differ, according as this partial alteration is made in the head or other parts; and this as it may be born without a head, or with the head of a beast, &c. Where a monster differs from a complete child, in other parts besides the head, it is distinguished into two sorts; as any parts in general are affected, or as more particularly the change is

wrought in the genitals only, and then it is called an hermaphrodite, which is likewise perfect or imperfect.

"In an enquiry into the nature of monsters in general, three objects of consideration present themselves. 1st. What is the cause of monsters? 2d. Whether are they possessed of life? 3d. Whether a perfect monster can be considered as a human being?

"1st. The cause of monsters is various, as depending on such changes in the constitution of the mother as can hardly be accounted for.

"Whatever view we take of the theory of generation, whether a germen be formed in the ovarium of the female, which is only impregnated by the semen of the male, or whether the homunculus is contained in that semen, and the female affords a nidus for its formation; still we see a strong resemblance to both parents in their offspring: and accidents or other causes contribute to make an entire alteration in the form of the fœtus, and produce monsters. We will not suppose unnatural connections, or that any impregnations can arise from that source; but imagination has a great power over the body of a female, especially during gestation; and the fluid in which the fœtus swims, or the womb itself may be disordered, so as to occasion great changes. Neither need we have recourse to the theory of the ingenious Buffon to explain how these are brought about; or suppose that every part of the human body has a representation in the fecundating quality of both parents, to form its construction. The first rudiments or germen of the human body is not a human creature, if it be even a living one; it is a foundation only upon which the human superstructure is raised. This is evident to anatomical observation. Were a child to be born of the shape which it presents in its first stages of pregnancy, it would be a monster indeed, as great as any which was ever brought to light. How easy then is it for disorder to prevent the exertion of that plastic force, which is necessary to form a complete animal.

"2d. Monsters may live, but it depends on what parts are affected, how long life shall be continued them. Where the monstrous parts are confined to the extremities, or even to those places which distinguish hermaphrodites, we find from

experience, that the vital powers are strong and vigorous; and were it not that such beings often fly from society, lead sedentary lives, and are deprived of some wholesome exercises to the human constitution, life might be enjoyed by them, and to as great an extent as by any other persons.

"3d. With regard to perfect monsters, most of the authorities which assert that any thing of that kind can exist, seem to be of no credit. But should any ever appear, we should consider that it is not form or shape, but reason and intelligence, which distinguish human creatures from brute animals.

"We are next to consider the nature of hermaphrodites; and as these are living beings, and sometimes capable of all the functions of society, such distinctions ought to be made relating to them, as will place their situation in the most proper light, and the most favourable to their happiness. They are great objects of our pity and complacency; for they are not only deprived of the common pleasures of mankind, but are subject to disorders which are painful, uncomfortable, and inconvenient. A perfect hermaphrodite, or a being partaking of the distinguishing marks of both sexes, with a power of enjoyment from each, is not believed by any one ever to have existed. Imperfect hermaphrodites, or monsters, whose organs of generation are affected, are frequently presented to us. They may be divided, according to the sexes, into what are called androgynus, and androgyna. The first is the male, who has in general his own organs tolerably perfect, but has some division in the flesh above, below, on, or in the scrotum, which puts on the appearance of the female pudendum. The penis likewise may be so obliterated, as to give no external appearance of the male; but the beard, and the constitution of his body, confirm him to be of that sex. The androgyna is a woman, who has the parts of generation nearly like another, but at the same time the clitoris grows to a great size, and gives the form of the male penis. This is a very inconvenient disorder, as she is sometimes deprived of the pleasures peculiar to her sex, and suffers much from disorders of the part. From her breasts, and the deficiency of beard, however, she is distinguished from the male; though it frequently and unfortunately happens, that such women are more subject than others to

robust and masculine constitutions. It is evident that the sexes here are as completely marked as in other persons, and, to all legal intents and purposes, they are man and woman.

"Some important enquiries may arise upon this subject. As, 1st. How far they are to be considered as impotent. This is, I believe, generally the case, but not always, and must depend upon proof. 2d. Whether they should be permitted to marry? This depends upon the former, but must, I should think, be left to their own choice. 3d. Whether change of the sexes might be allowed? This is certainly contradicted in the terms, and will admit of no dispute.

"With regard to the state of life of a child, the following question remains to be decided: At what time may a fœtus be supposed to begin to live? To answer this, we must consider, that conception is made in the ovarium of a female after coition with a male, when the subtile aura of the semen hath so far penetrated into the germen, which may be supposed to contain the outline of the future man, as to produce a turgescence and motion of its circulating humours. At this time, it may be said that life begins, i. e. immediately after conception. Hence those seem to err: 1st. Who would persuade us, that the fœtus acquires life when it is so particularly active, that the mother becomes sensible of its motions. 2d. Those who think that life does not begin till the seventh or fourteenth day, or even till a month after conception. And, 3d. Those who suppose that a fœtus, as long as it continues in the womb, where it does not breathe, cannot be called a living animal. The whole depends on our ideas of life and animation, and the act of generation to create it. If generation be the cause of animating the rudiments of the future being, and if that animation be construed to be understood by what is meant by life, then it must certainly begin immediately after conception, and nothing but the arbitrary forms of human institutions can make it otherwise.

"On this occasion we may enquire, what part of the human body is the seat of animation, or the soul? To which we answer, that evidently it resides most conspicuously in the brain, because that substance being hurt, all the faculties of the soul become disordered; and because all the nerves of the body, which are the great instruments of action, are derived from it

as a fountain. But it cannot be supposed that the whole of the brain is the immediate seat of the soul; it is probably confined to what is called the sensorium commune, or a small part from whence the nerves, destined to sense and voluntary motions, draw their origin; as they do likewise from an appendix to it, called the medulla oblongata.

"The next thing to be considered is, what kind of children, when born into the world, are to be deemed endued with life, or have a prospect of living; for a fœtus cannot live out of the womb of its mother.

"1st. Then, no abortion can be said to be endued with life: for if there be some signs of life when it is brought into the world, it cannot continue to live, for it can neither take the aliment which is necessary to its sustenance, nor, if it could take it, can it change such gross food into its tender nature. Some authors have asserted, that children of five or six months have lived; but this is probably a mistake; it being generally agreed, that infants so young cannot sustain the inclemencies to which they must be subject.

"2d. Children of seven months, or one hundred and eighty-two days after marriage, may live, though generally they are puny, and continue but a short time on earth.

"3d. All children above seven months are supposed to be endued with vital principles, and of consequence are allowed the privilege of life.

"The next subject of consideration is that of twins, suppositious births, and superfœtation.

"The right of primogeniture must be determined in natural births, by that which was first born into the world, and which must be decided by the by-standers. If the delivery, however, be made by a passage effected by art, the choice depending on the will of the surgeon, no proper determination can possibly be made.

"In the affair of suppositious births, two questions occur, according as the birth is performed or not. In the former case, a physician may judge, 1st. From those signs in the mother, which distinguish her having been delivered of a child. 2d. From those signs which refer to her incapacity of conception. 3d. From signs of impotency in the father. 4th. From the

umbilical cord in the child not appearing as of one just delivered. Some persons look upon the dissimilitude to the parents to be a sign, but this must be very fallacious. Where the suppositious birth depends on the present state of pregnancy, either the proper signs must be examined, or we must wait the event, should those signs deceive us.

"The impregnation of a woman already pregnant, is called a superfœtation. This is either true or false; the former is, when it happens in the womb itself; the latter, when one fœtus is deposited in the womb, the other in the ovarium, the fallopian tube, or the cavity of the abdomen.

"The following requisites are necessary to a superfœtation. 1st. The pregnant woman ought to bear two children, each of a distinct age. 2d. The delivery of these children should be at different times, at a considerable distance from each other. 3d. The woman must be pregnant and a nurse at the same time.

"There have been many doubts about the reality of the superfœtation, but there is no disputing of facts; for which see Graves on Superfœtation, Eisenman's Anatomical Tables, and the Leipsic Memoirs, 1725.

"How this superfœtation is accomplished, is a matter of enquiry, and depends in a great measure on the constitution, or rather the formation of the womb of the mother.

"The last thing to be considered under this head of parturition, is the legitimacy or illegality of births; and this is divided into the time when a child is born after conception, and the conformation of its body. With respect to time, physically considered, (for laws may be as arbitrary as they please in this respect) all abortions, too early births, children of nine months, and those who are late born, even to ten months, may be considered as legitimate in old marriages. Illegitimate with respect to the time of birth, are all perfect and mature children, who are born in the sixth or seventh month after the celebration of marriage; and all late births, when extended to the eleventh, twelfth, or thirteenth month, especially if the husband died of a chronic or lingering disease.

"There are many causes alleged to occasion a delay or prolongation of delivery, such as great care and anxiety; some

severe diseases, as violent hæmorrhages, a phthisical disposition, &c., but these, one should imagine, would rather hasten than retard such a circumstance. Experience is the only guide we can follow in such cases; and, for the sake of humanity, the longest time that can be fairly proved, should be the standard to which we should refer.

"With respect to the conformation of the body, all children may be considered as legitimate, who are born at or after seven months; but all abortions are illegitimate. Monsters, likewise, are not to be excluded for any trifling alterations; but where all appearances of human nature are obliterated, it would be wrong to take advantage of such a birth.

"I. Idiotism is, 1st. either born with the subject of it, or appears as soon as the reasoning faculties should begin to expand.

"2d. It is established upon great defects of the memory, and much greater of the judgment, though this is not much attended to.

"3d. Idiots are in general prone to mischief, or to actions over which reason seems to have very little command.

"4th. They have not a proper command over the evacuation of fæces and urine, and drivel at the mouth.

"5th. They have generally strong and hearty constitutions.

"6th. They have a peculiar aspect, which describes a vacancy of thought and inattention to any engagement.

"7th. They have little use of speech, and articulate very incoherently.

"II. Insane persons are either furious or melancholic; both of which acknowledge a great imbecility of the mental faculties, and which are derived from hereditary constitutions, attention of mind, violent passions, the terrors of a false religion, immoderate use of venery, poisons of the narcotic kind, some preceding disorders, the suppression of evacuations, indigestible aliments, a sedentary life, &c. But they differ in the following particulars:

"1st. The furious insane are naturally of angry and violent dispositions, in the prime of youth, and of a plethoric constitution, and tense fibre.

"2d. They lose all their natural delicacy of manners, and

become furious, ungovernable, and are particularly affected by pride, anger, hatred, and revenge, and very often intemperate lust.

"3d. They refuse their food, and yet preserve their strength; they scarcely ever sleep, are continually shifting their ideas from one thing to another, bear the cold with incredible patience, and are not easily affected by medicine.

"4th. They have a peculiar look with their eyes, descriptive of violent anger, mixed with a glariness like that of drunken persons; their eye-lids are constantly vibrating, and their hands, and sometimes the whole body, they keep in motion.

"Melancholy persons are,

"1st. Naturally dull, slowly learning, and easily forgetting, and are sad and melancholy, of a phlegmatic temperament, and relaxed fibre.

"2d. When the disorder seizes them they become abject, fearful, fond of solitude, prone to anger, changeable in their opinions and desires, but fixing their attention upon a single object.

"3d. The belly is constipated, the urine is made in small quantities; the abdomen is distended with wind; a sharp acrid matter is discharged by vomiting; the pulse moves very slowly; the aliment is devoured with greediness; the imagination is perverted so as that they are persuaded that they are made of glass, china, &c.; and lastly, and worst of all, they are induced to put a period to their existence.

"4th. Their eyes have a dull, heavy, and stupid look; they seldom move, but continue in one posture a very long time."

BIOGRAPHICAL SKETCH OF BICHAT.

[From the London New Medical and Physical Journal, for April, 1815.]

MARIE-FRANÇOIS-XAVIER BICHAT was born on the 11th day of November, 1771, at Thoirette, in the department of Ain. He was the eldest son of Jean-Baptiste Bichat, doctor in medicine of the faculty of Montpellier.

Thus fortunately circumstanced, Bichat was, at an early age, initiated in the principles of that science of which he was one day destined to become a distinguished ornament. From his cradle he was familiarized with that language, of which too many neglect the acquirement till called upon to employ it; and the daily application of precepts was presented to his view, ere the precepts themselves had been explained. Thus he possessed all the advantages of that education, which, operating by the force of example, insensibly disposes the mind to a determinate path of labour. That science, which must ere long become the object of severer studies, was first arrayed in an interesting and attractive garb. Upon the powerful effects likely to result from such an education we need not insist: they can be despised only by those incapable of correctly appreciating their magnitude and importance.

We pause not at that early period of the life of Bichat, which he passed in the ordinary routine of juvenile studies. The laurels which he won in rhetoric we shall not enumerate, nor display the honourable distinctions acquired by him in the exercise of philosophy. Interested only in tracing his professional career, we pass on to those maturer years, at which he first exclusively devoted himself to the cultivation of medicine.

At Lyons he commenced his anatomical labours. The unwearied ardour of his exertions, and the facility with which he surmounted the ordinary difficulties of dissection, soon attracted the vigilant eye of his preceptors. Frequently called upon to assist in the business of instruction, he, on these occasions, first displayed that clearness of idea, which formed, in after years, a conspicuous trait of his excellence as a teacher.

Anatomy, at that period, was little cultivated in France, except as the necessary introduction to surgical studies. In explanation of this remark, we need only to take a retrospective glance of the epoch to which it applies. The celebrated Desault then presided over the healing art: his ardent and enterprising genius had awakened an universal predilection for surgical pursuits. This predilection was signally favoured by the character of the times. Convulsed and bleeding within from the revolutionary struggle, France could only sustain herself by the arm of external conquest: her existence as a nation depended upon her military achievements; and the wounds of her victorious armies on every frontier unceasingly called for those cares and solaces which the hand of surgical science could alone bestow. Hence medicine, strictly so called, experienced a temporary neglect.

Urged on by the general impulse, Bichat at first directed his attention exclusively to the surgical department. He studied the principles of the science, and entered upon their application to practice under M. A. Petit, chief surgeon of the Hotel Dieu at Lyons. His zeal, and the rapidity of his progress in the path of knowledge, soon riveted the confidence of this great and estimable man: but Bichat was formed to shine upon a more distinguished theatre. The capital displayed a field for his genius, and opportunities of cultivation, elsewhere denied: thither he was at length borne by the revolutionary torrent. Obliged, after the siege of Lyons, to quit a soil where youth itself was deemed a crime worthy of the scaffold, he sought in the city of Paris that safety which no distinction of age or talent could find without its walls.

These were melancholy times: nor is it surprising that, at such a period of universal gloom and consternation, Bichat little thought of unfolding, in their native splendour, the uncommon talents which he possessed, and limited his views to the ordinary track which young surgeons in general are destined to pursue. His education finished in the school of Desault; he determined next to seek practice and personal security in the armies of his country.

Mingling with a crowd of pupils at the Hotel Dieu, Bichat,

alike inemulous of distinction and thoughtless of preferment, contented himself with writing down the public lectures of Desault. His application to professional duties was unremitting. At length the 27th of July dawned more conspicuously on the drooping sciences, and the soul of talent arose somewhat reanimated from its long depression. Bichat became conscious of his extraordinary powers; his views were extended; and a fortuitous event at once raised him from obscurity to an elevation honourable as unexpected.

A certain number of select students was appointed, each in regular succession, to take down the public lecture of the day, and arrange it in the form of an extract. On the morning after, such extract was read over to an assembly of the students, at which an assistant-surgeon presided. This was an established custom in the school of Desault: the advantages resulting from it to the cause of instruction are sufficiently conspicuous. We pause not to enumerate them.

Desault had, one day, been speaking at unusual length on fracture of the clavicle, and demonstrating the utility and application of the bandage employed by himself in these injuries. The student who, on this occasion, should have recorded the lecture, was absent. Bichat offered to supply his place. A strong sensation was excited by the delivery of his extract: the purity of his style, the clearness and precision of his ideas, the scrupulous fidelity of his recapitulation, would have done honour to a professor. He was heard with extraordinary attention, and left the room amid reiterated bursts of applause.

Alike capable of justly appreciating talent, and skilled in discerning even its most delicate and fugitive traces, the illustrious Desault neglected no opportunity, which his situation presented, of extending favour and protection to those in whom its energies or aspirations were displayed. No sooner had he learned from citizen Manoury the merits of young Bichat, than he expressed impatience to know him. On the first interview was disclosed to his sagacious glance the future destiny of his disciple. He hesitated not to offer to Bichat a residence in his own house; and from that moment looked upon him as his son, and as the heir to his professional reputation.

Thus was the native energy of Bichat excited to the utmost pitch: his exertions were unremitting. The variety of subjects, upon which his ardent and vigorous mind was employed, constituted his only relaxation. During the day, he was occupied in attendance upon the private or hospital practice of Desault, or in conducting his extensive professional correspondence; and in the researches upon various interesting points of surgical science greater part of the night was commonly consumed. He moreover contributed largely to a work upon diseases of the bones, undertaken by Desault towards the close of his earthly career. In this novel path of labour, our indefatigable student acquitted himself with great honour and punctuality. Yet, from pursuits thus various and exhausting, the active mind of Bichat could still rescue some transient intervals of liberation; but those, short as they were, he gave not to pleasure or repose. They were spent in the dissecting-room, or devoted to surgical or physiological discussions amid a circle of enlightened friends.

At length Desault died.* This unexpected event grieved Bichat, but did not disconcert him. His genius rose superior to difficulty and trial; he had become conscious of its energies and resources. Thus, after shedding the tears of gratitude over the grave of his lamented friend and benefactor; after presenting, upon the page of science, a fair and not inadequate tribute of veneration to the memory of that illustrious man, he thought only of entering with vigour on the more difficult and exalted path which opened to his view.

It was at this period that, abandoned to his own exertions, Bichat began the series of labours and experiments destined to immortalize his name. In the year 1797, he delivered his first course of anatomical lectures. With the modesty, almost universally characteristic of great talent, he forbore to open a

* Desault died on the 1st of June, 1795. The horrors of the revolutionary period had taken a firm hold upon his mind, and evidently accelerated his dissolution. He was arrested in May, 1793, on a charge of refusing to assist the wounded Republicans, on the memorable 10th of August; but liberated after three days' confinement in the dungeons of the Luxembourg. He was born at Magny-Vernois, a village in the province of Franche-Compté, on the 6th of February, 1744.

dissecting-room, and contented himself with simple demonstrations in a confined and incommodious situation. This year were established the outlines of his theory of the synovial membranes; a prelude to the grand work on membranes in general, which was shortly to be developed. The intervals of his lectures were assiduously devoted to scientific discussions with the more accomplished of his pupils, or to accessory courses of instructions in the various departments of anatomy and pathology. He entered also upon a course of surgical operations. In this novel and arduous character, to the assumption of which, except by a veteran and exclusive instructor, public opinion had been hitherto decidedly hostile, Bichat acquitted himself to the astonishment of the numerous students who crowded his lecture-room, rather from curiosity, than an anticipation of his success.

But amid such various and laborious occupations, the health of Bichat sensibly declined. The exertions of public speaking brought on a profuse and perilous hæmoptysis. Apprehensions for his life were excited. During a long confinement to bed, the pains of disease were far less terrible to his mind, than the disappointment and regret which a state of inactivity inflicted. His health re-established, he re-entered the field of labour with augmented energy. In the confident anticipation of the honours that awaited him, all remembrance of danger was utterly buried. He began a second course of anatomical lectures, more extensive than the former; and his dissecting room, now first established, was soon frequented by eighty students.

The difficulty of obtaining bodies was, at this time, extreme, and productive to our young teacher of extraordinary fatigue; but these obstacles, which would have damped the enthusiasm of a common mind, served but to kindle more effectually the spark that glowed in the heart of Bichat. Public Lectures, for which his own hand frequently prepared the subject of illustration,—a series of physiological experiments on living animals,—and private demonstrations, engrossed his attention by day; and when at evening, overwhelmed by weariness and spent with continual exertion, he reached home, other cares awaited him, and the hours of darkness, stolen from repose, were de-

voted to a compilation of the surgical works of Desault, a last tribute of respect to the character of his departed friend.

The investigations of Bichat, hitherto exclusively confined to the structure of the human organs, began now to be directed upon their functions. A new light was about to dawn on the science of physiology. The membranous system, at that time little explored by anatomists, presented to his enterprising mind a field of investigation alike fertile and attractive. From this period to the close of his short but memorable life, the pen of Bichat was unremittingly employed in unfolding novel views, or recording important discoveries in medicine or the auxiliary sciences. To enter upon any diffuse criticism of the literary production of this extraordinary young man; to examine his opinions, or decide upon his disputed merits, constitute no part of our present object. His various works we shall presently enumerate in the order of their publication, and content ourselves with remarking, that all of them which we have been able to procure, bear, although in an unequal degree, the traces of an intellect, gifted with great and rarely united powers. Boldness, ardour, originality, and all the attributes of commanding genius, were blended in the character of Bichat with the circumspection of gray-headed philosophy; and application, inflexible and exhaustless.

To his Researches on the Pathology of the Human Organs, the same novel principles were applied by Bichat, which had before so happily directed his examinations of their intimate structure and composition. He had explored and described each determinate tissue in the healthy state; it now remained for him to survey and discriminate their various changes under the influence of disease. This was an enterprise more vast and complicated than the former. None but the enlightened pathologist can correctly estimate its magnitude or difficulties. Numerous dissections must be performed, and the morbid phenomena traced in the living subject, or much of the light resulting from those dissections would be lost. All these labours were executed by Bichat with astonishing activity and perseverance. In a few months, he examined with his own hand more than six hundred bodies; and watched himself all the more instructive cases of disease which the Hotel Dieu presented. The

new and interesting information thus acquired, was afterwards communicated in a distinct course of lectures; and he, who had recently excited universal admiration, as the successor of Haller, was now beheld following with equal honour and applause the footsteps of the immortal Morgagni.

It was proved by Bichat, that each determinate kind of structure possesses a peculiar organization and properties, and is influenced, in its own peculiar mode, by diseased action; and, moreover, that the morbid condition of one membrane does not necessarily implicate the structure of neighbouring, or even contiguous membranes. This truth had not escaped the eye of other observers; but it is contended by the friend and eulogist of Bichat, that the insulated facts and disjointed observations of preceding writers had absolutely sunk into oblivion and neglect; that Bichat, more devoted to the study of Nature than of books, was really ignorant of their existence; and hence, that although the facts in question had not been utterly unknown to his predecessors, he might fairly claim all the honours of the discovery.

The close, we might almost say the last moment of the life of Bichat was occupied by researches on materia medica. His luminous and comprehensive mind had long been forcibly struck by the confusion and obscurity which hung over this interesting department of science: and he judged, that by methodical cultivation on fixed principles, it might be made to participate the improvements which other branches of medicine had experienced. In a preceding work, he had exposed the outline of his ideas on this subject; he had stated the necessity of classing medicinal agents, according to the influence they exert upon the vital properties. The former he now sought more fully to develope; and it remained for him to investigate the operation, sympathetic or direct, of the numerous articles of materia medica upon the different organs, or systems of organs, of the human fabric. For this object, reiterated observations were requisite. The Hotel Dieu, of which he had recently been nominated physician, afforded an ample theatre for experiments; and more than forty students zealously seconded him in these laborious researches, of which he, every day, in a separate lecture, stated the result. But the arm of death was

now raised to strike its victim, and the fair hopes, already in part realized, were about to be crushed for ever.

It was but too evident, that the career of a man, thus ardent and unwearied in exertion, thus careless of health, and prodigal of repose, must soon terminate. On every side, danger was foreboded, and gastric disorder committed frequent depredations on his system: but all was useless. Neither the warning voice of friendship, nor the menaces of disease, could arrest the step of Bichat in the path of science. Amid the burning heats of summer, he continued regularly to inspect the specimens of morbid anatomy, submitted to maceration for the purpose of experiment, and rashly exposed himself to their noxious emanations. One day, his sensibility of their baneful influence had been greater than usual; and an unfortunate accident decided the attack for which so many conspiring causes had paved the way. He fell in descending the stairs of the Hotel Dieu. A transient loss of consciousness succeeded this slight commotion. Regaining home with some difficulty, he passed a tolerably tranquil night. On the ensuing morning, a vehement head-ache arose, but did not prevent him from visiting his patients. Fainting was induced by this improvident exertion, and he retired to bed. The application of leeches to the head was, at first, productive of relief; and the consequences of the fall ceased to excite alarm. Presently, however, a train of gastric symptoms was developed in unusual characters of vehemence and alarm. A continual tendency to drowsiness came on: it was the mournful prelude to the closing scene of existence. Bichat died on Wednesday, July 21, 1802, the fourteenth day of his illness. From the justly celebrated Corvisart, and M. Lepreux, first physician of the Hotel Dieu, he received, during his short confinement, the most unremitting professional attentions.

Few men have been more generally esteemed than Bichat. The sensation excited by his loss was deep and universal. Throughout the medical school were evinced the strongest demonstrations of regret. More than five hundred students attended the funeral solemnity of Bichat, and Lepreux pronounced over his grave an eloquent and affecting eulogy.

Bonaparte, then First Consul of the French Republic, with

that laudable attention to the interests of science, which shone conspicuous in the gloom of his great but ferocious character, was no sooner apprized of this mournful event, than he ordered a monument to be erected at the Hotel Dieu, in commemoration of two men not more illustrious for their talents, than for the successful application of them to the most noble and beneficent studies that can occupy the human mind—the alleviation of human misery. On this monument are inscribed the names of Desault and Bichat—names that shall not perish, while one wreck of European splendour and reputation in medical science floats upon the stream of ages.

In the winter of 1798, Bichat published *the Surgical Works of Desault*, in three volumes octavo, with a long and animated "eloge" of that justly revered man. The doctrines of Desault are here exposed with clearness and fidelity; but the style of the work betrays negligence and haste.

Six memoirs, on various surgical and physiological subjects, appeared about the same time. The two first exhibit their author's novel views of the membranous system. In the third, he described a new species of trephine. The fourth was on injuries of the clavicle; the fifth on an improved mode of applying the ligature to polypi. In the sixth were developed the principles on which his distinctions of animal and organic life reposed. These we have not seen.

About this time, the celebrated *Treatise upon the Membranes* excited the public attention. It is too well known to require eulogy or illustration from our pen. The matter composing it is incorporated, after undergoing many improvements and corrections, in a subsequent work.

The Physiological Researches on Life and Death, one volume octavo, was published in 1799. Under this title are comprehended two distinct and independent works. The first contains a general exposition of our author's physiological views: in the second is illustrated, by a series of novel and beautiful experiments, the mutual connection subsisting between the three principal organs of the animal economy; the brain, heart, and lungs.

Next in order of succession comes *the General Anatomy*, in four volumes 8vo. This is the work to which we allude, in

speaking of the treatise upon the membranes. It involves a general consideration of the isolated materials which enter into the composition of the various organs, and the particular attributes by which these materials are respectively characterized. Bichat designates it, and it may be regarded as a system of medical anatomy.

We have now only to mention *the Descriptive Anatomy*. On this production the last efforts of Bichat were employed. He did not live to complete it. Two volumes only were published previously to his decease. The third was at that period nearly ready for the press; and this, with the two concluding volumes, was finished on similar principles of arrangement and description, by Messieurs Buisson and Roux; to whom Bichat, in his last moments, confided the undertaking. From the eloquent "precis historique," prefixed by the former of these gentlemen to the third volume of the Descriptive Anatomy, have been principally gleaned the scattered materials with which a foreign hand presumes to erect, on foreign soil, a rude and perishable monument to the genius of Bichat.

By different observers, the talents and merits of Bichat have been variously estimated. Extravagantly eulogised on the one hand, by blind and enthusiastic admiration; he has, on the other, been unjustly lowered, by envy and prejudice, to the level of ordinary men. Truth, we believe, on this, as on most occasions, lies in the medium, between opposite extremes. His claim of originality in the doctrine of the membranes, the ground upon which his high reputation as a physiologist seems principally to rest, may, we think, be fairly disputed. Certain it is, that previously to the period of the researches of Bichat, the early gleam of this luminous and beautiful doctrine, might have been discovered in Continental, and even in British writings; nor can we agree with M. Buisson, that they were neglected or forgotten. But it is asserted by this gentleman, that Bichat was utterly ignorant of the observations of his predecessors on this subject. Perhaps so. It would be presumptuous and indelicate in us to hazard a contrary opinion. Yet, that a man, like Bichat, entering upon an obscure and little ex-

plored path of investigation, should neglect to concentrate all the light which the remarks of preceding labourers might have thrown upon it, is an inference somewhat difficult of admission. And they, moreover, who have duly studied the operations of the human mind, must be well aware of the facility with which are imperceptibly appropriated to oneself the opinions of others; and the impossibility of retracing, at a future, and perhaps remote period, any determinate train of ideas, with clearness and precision, to its original source.

However this question be decided, even enmity and prejudice themselves must acknowledge, that the faculties and attainments of Bichat were alike extraordinary. To develope the mutual relations of scattered and imperfectly known facts, and determine, on unerring principles, the order of their arrangement, so as to constitute one fair and connected whole, frequently demands greater delicacy of intellect,—application more vigorous and intense, than discovery of the facts themselves. Is it generous, or even just, to detract from the glory of our immortal Harvey, because some insulated truths respecting the circulation were known previously to the epoch at which he flourished?

And whether we recollect that, at the age of thirty years, Bichat stood pre-eminently distinguished, by his labours and literary productions, in almost every branch of medical philosophy; or behold him enjoying, long ere the meridian of his day, as anatomist, surgeon, physiologist, and physician, a degree of public confidence and celebrity that rarely illumines the evening of age; our admiration and astonishment are equalled only by the humiliating consciousness of our own inferiority: and we turn from the contemplation of transcendant excellence with shame and heaviness of spirit, which none can participate —none can comprehend—but those, in whose ear

> "Memory doth oft denounce the bitter curse
> "Of time misspent, of talent misapplied,
> "And fair occasions gone for ever by."

That they who are loudest and most eager in detracting from the merits of Bichat, participate most poignantly in our feelings, it is not unreasonable to conjecture. We think they

might be more usefully and honourably employed in following his steps, and emulating his reputation.

Bichat, if we may credit the glowing language of perhaps too indiscriminate eulogy, was modest, frank, open, generous; the patron and protector of indigent genius; affectionate to his friends; charitable and meek, and forbearing towards his enemies. That some deep shades of human failing and infirmity were not blended with these glowing excellencies of character, we are, alas! too familiar with the innate and universal depravity of the human heart to hope. But we will not violate the sanctity of the tomb. Those failings, whatever they were, rest with him; or are lost in the remembrance of his great talents, and of the distinguished services rendered by him to the cause of science.

MEDICAL AND PHILOSOPHICAL INTELLIGENCE.

Exposé of the State of Medicine in France during the year 1814, *being the Anniversary Discourse of* Baron Des Genettes, *as President of the Faculty of Medicine of Paris.*

[From the London Medical and Physical Journal, for April, 1815.]

GENTLEMEN,

A year has elapsed since one of our number, according to custom, opened the schools of medicine, by taking a view of the progress of medical knowledge during the preceding year.

I shall confine myself to the exposition of our labours; afterwards do homage to the memory of such of our colleagues as have been recently taken from us; and lastly, fix the public attention of their fellow pupils on such of our students as shall receive the prizes this day awarded.

Baron Boyer, our colleague, has published in the course of the year a "Treatise on Chirurgical Diseases and Operations." The author of this important work thinks that the progress of modern surgery has been so rapid and remarkable, that it seems to have attained the highest degree of perfection of which it is susceptible. The greater part of surgical diseases are now perfectly well known, both with respect to their phenomena or the indications which they present. We may even frequently ascertain their proximate causes, determine their essential character, and consequently the best treatment. Instruments and apparatus are simplified from day to day; and the application of medicaments is better understood.

Therapeutics and Hygiena, which sometimes of itself supplies their place, and always aids them, belong to both branches of the medical art; the improvement of the therapeutic and hygienic methods, therefore, equally ensure the success of internal and external applications; a new proof among many others, of the indispensable necessity of rendering common to medicine and surgery the same institutions, and consequently the same sources of instruction.

Improvements so great, admitted by the whole world, and the chief glory of which is cheerfully conceded to the French,

have rendered necessary the new publication of an entire body of chirurgical doctrine, to unite, in a treatise of a size at once convenient and elementary, knowledge scattered in books which would form a library.

M. Boyer, after the example of some of the restorers and promoters of the art, divides surgical pathology into two great parts. The first is dedicated to the diseases which appear in every part of the body, and is subdivided into several chapters, in which he treats of inflammation in general, of abscess, gangrene, burns, wounds, tumours, ulcers, and the various diseases of the bones and articulations.

The second part, drawn up after an arrangement purely anatomical, embraces the diseases peculiar to each organ. Most of the diseases which require surgical operations are referred to this division.

The author informs us, that it never was his intention to annex a complete treatise on operations, which would require immense labour. For these he refers to particular works on operative surgery, more especially to that recently published by M. Roux; adding, that the union of this work with his own will form a complete system of surgery.

On witnessing this association of a man of consummate experience with one who is still young, let those who are ignorant, or pretend to be so, of the state of our present method of instruction, cease to indulge in absurd declamations! Let them no longer repeat, in the face of direct evidence, that our school has never formed, and never will form, surgeons. We shall answer them by telling them that Richerand, Dupuytren, and Desormeaux, were seated on the benches of this school, before they sat among its professors; and that the former students of this school, such as Ribes, Tartra, Marjolin, Baffos, Beauchêne, Murat, Beclar, Baren, Brechet, and several others, promise to be the worthy successors of those who are now at the head of French surgery.

On reading M. Boyer's work, as well for my own instruction, as to give an account of it at this meeting, I could not refrain from making some reflections on the chapter entitled "On the Gangrene produced by Freezing." An eye-witness of the disasters which attended the retreat from Moscow, I

had an opportunity of observing, in an almost innumerable mass of men, the effects of the most rigorous cold.

I pass over in silence that perfidious sleep which fixes the body on a frozen bed, and induces inevitable death.

The doctrines of M. Boyer are entirely conformable to my own observations. To describe our sufferings would be to copy his whole chapter. Let us merely quote a few lines: "A sudden augmentation of very intense cold," says M. Boyer, "particularly when it is accompanied with wind, frequently occasions gangrenous affections and sudden death." We saw all this but too well verified, when, on the shores of the Beresina, a very violent north wind covered our faces with flakes of snow. The thermometer then stood at 21° below the freezing point; and it fell a few days afterwards to 24°, and even to 27°.

In another place M. Boyer says: "It has been thought that the cold extinguished the vital action, merely by coagulating the animal fluids; but the phenomena which accompany freezing announce that the cold acts on the solids also, and particularly on the vessels and nerves. It acts on the former by diminishing and even extinguishing their organic action; on the latter by blunting their sensibility, and thus preventing the exercise of their functions." We may go farther, and indicate a mode of action of cold, little known, a very intense effect on the brain and nerves, even when congelation has not attacked any part of the body at a distance from the centre of circulation. We have seen men, marching with every appearance of muscular energy, and the most decided and soldier-like pace, and heard them suddenly complain that a thick veil was covering their eyes. These organs, at first for an instant haggard, soon became immoveable; all the muscular apparatus of the neck, and more particularly the *sternocleido-mastoidei* muscles, became rigid, and gradually fixed the head on the right or left shoulder. The rigidity next extended to the trunk; the lower extremities then tottered, and the unhappy victim fell upon the ground, exhibiting, to complete the frightful picture, all the symptoms of catelepsy or epilepsy.

But to return to M. Boyer and his work: he has not entered into any details respecting the history of the art; he has not even indulged in a quotation, for this would not accord with

his plan. " He is anxious (I copy his own expressions) to show what is proper to be done, and not what has been done, upon this or that occasion."

A professor, who, like M. Boyer, has been long in the practice of lecturing, must occasionally find his own ideas in circulation. He has, in fact, recognised some, and has informed the public of them, that he might not pass for the plagiarist of those who have actually copied from him.

In a word, the work of which we have just given a slight sketch, is worthy of M. Boyer's high reputation.

Professor Richerand has also published, in the course of the year, the sixth edition of his Physiology. Although not essentially different from the former editions, and, although the same arrangement is preserved, yet several points of doctrine have undergone modifications, corrections, and important additions. Some articles, which were formerly too concise, have received the desired extension. Taking advantage, in short, of the labours which daily enrich physiology, M. Richerand has learned how to found them, and to appropriate them to himself, so as to justify the title of " New Elements," which his celebrated work bears, the preceding editions of which have been already translated into several languages.

M. Alphonsus Leroy, another of our colleagues, has published a little treatise " On the Contagion which lately raged among the Cows, Oxen, and even the Human Race, in some Parts of France." He has therein discussed the causes of contagion, with the means of remedying and preventing them; and concludes by some reflections on the utility of extensive public lazarettos.

M. Leroy confesses that his work was hastily drawn up, on the spur of the moment, arising from the alarm of an approaching contagion which threatened the department of the Aisne, where, fortunately, however, it did not break out. The treatise is as it were a detached portion of an extensive work, which presents ideas in many respects new, but which are not yet arrived at the degree of maturity to which the author proposes to extend them.

M. Leroy, in his ardour for the advancement of medical science, and more particularly that branch which relates to the

health of the female sex, has had the boldness to advise, in a case of schirrous uterus, the revival of the operation first practised by Osiander, and since executed by M. Dupuytren with all the dexterity for which he is distinguished. I merely indicate these subjects, leaving it to our colleagues to give the interesting details to the public, if they think proper.

Our colleague, M. Petit Radel, continues to be occupied in editing several articles for the *Encyclopedie Methodique*. We know that almost the whole of the surgical part of this grand dictionary has been executed of late by this laborious professor. We shall find, in succeeding numbers, several medical articles, by M. Petit Radel; among others, those which relate to hereditary, moral, nervous, organic, rheumatic, soporific, and syphilitic diseases. We shall also therein find the article "Ancient and Modern Physicians, as well religious as atheistical."

It could not be difficult for our colleague to prove the religious character of several of our professional brethren, but has he shown with equal clearness that others among them have merited the reproach of atheism? Is not this rather one of those outrages inconsiderately committed upon great minds by the intolerance of ignorant sectaries, or by the interested supporters of the most ridiculous superstition? We see, on the contrary, that, even in the days of polytheism, the religion of the physicians, in conformity to reason, rose above vulgar credulity. How exemplary and beautiful was the worship of Galen, when, exploring the remains of men and the animals, the structure of which he was studying, he said to the gods: "I shall describe these wonders and they shall serve as the hymns by which I shall celebrate your power!"

The alarm, more or less well founded, relative to the introduction into the capital of a contagious fever, which raged in several places where the armies were quartered and fought, or left sick behind them, gave rise to instructions which were drawn up by the Faculty of Medicine. I shall respect the modesty of those who drew up these papers, and omit, like themselves, to publish their names.

Many physicians and students of our faculty have been sent to give assistance to the menaced and actually diseased departments. Others have been of great service in the hospitals of

Paris, while several have fallen victims to their humane exertions. Brilliant rewards have signalized the names of part of the survivors, and all have acquired just claims on the public gratitude.

Among the inaugural dissertations presented to the Faculty in the course of the year, the following have been particularly remarked. I cite them in the chronological order in which they appeared.

1. Analytical Researches on various Affections, in which the Skin presents a Blue Colour, and in particular on those which have been designated by the name of Cyanose. By M. Gintrac.

2. Dissertation on the Plague, or Adeno-Nervous Fever. By M. Le Breton, of Rhodosto in Greece.

3. Observations intended to resolve the Question: Is the Apoplexy which is produced by an Afflux of Blood to the Brain, susceptible of Cure? By M. Riobé.

We shall now speak of the labours of the Members of the Society of Medicine, which we purposely confound with those of the Faculty of Medicine itself.

M. Alibert has given a new edition of his Elements of Therapeutics and Materia Medica. This work, which was translated as soon as it appeared into several languages, has been long diffused and received among the most celebrated medical schools of Europe. Nothing can be more judicious than the course pursued by the author in this imperfect work, which is the result of much profound and well directed study.

The Preçis of M. Alibert respecting Mineral Waters has this year received many important additions.

His great work on the Diseases of the Skin sustains its reputation. The ninth number, which treats of syphilitic affections, is full of striking matter. The rare perfection which we see in the execution of the plates, gives a great interest to those objects, hideous as they are. We expect with a lively impatience the continuation of this magnificent work, in which scrofulous cutaneous diseases will be treated.

M. Roux has published a "Memoir and Observations on the immediate Union of the Wound after the circular Amputation of the Limbs in their continuity, and particularly after

the Amputation of the Thigh," which were read to the class of Physics and Mathematics of the Institute on the 21st of March, 1814.

This paper, the object of which is to discuss and revive, from observations actually made, methods which have been rejected, opposed, or laid aside, has been sufficiently appreciated, and has received the encouragement which it deserves, in a report by Messrs. Percy and Deschamps, adopted by the Institute, and published at the end of their Memoirs and Observations for the Year.

M. Roux has added a curious case of a Divergent Strabismus of the right Eye, cured in an adult, who was affected with it from infancy.

We are of opinion that concerning a deformity in an organ so sensible as the eye, not only are repeated experiments requisite, but there must also be a permanency in the relief or the cure, ere we can decide upon the merit of the method, and ascertain, if we may be allowed the expression, what is truly specific.

Since the publication of the work just announced, M. Roux has made a visit to London, and we are assured that he intends to publish some observations, in order to make us acquainted with the particular practice of the most eminent surgeons of that capital. Such communications must be very instructive when coming from enlightened and impartial men, who have had time to look calmly around them. It will be at once advantageous and pleasing to know, after so long an interruption of our intercourse, who are now-a-days the successors or rivals of Pott, John Hunter, Keate, and Blizard.

M. Nysten has published "A Dictionary of Medicine, and of the accessory Sciences," 1 vol. 8vo. This work cannot fail to be very useful to students.

And why should we omit an important work composed by a young Spanish physician, who graduated with our Faculty, and, by the circumstances of the times, became in some measure one of our adopted sons?

M. Orfila, the gentleman in question, has this year published a "Treatise on Poisons from Minerals, Vegetables, and Animals." This general toxology is drawn up with a due regard to

physiology, pathology, and medical jurisprudence. Such a work, put forth with the assistance of several experiments and accurate observations, ought to be the better received, as it was really a desideratum in medicine and jurisprudence: in fact, all preceding treatises are, without exception, incomplete, inaccurate, and far behind the present state of our knowledge.

M. Orfila, in the first place, carefully describes the physical and sensible characters of poisons, in their simple and natural state; and afterwards indicates the chemical properties of those substances, noting with great exactness the phenomena which they exhibit by means of the greatest possible number of re-agents.

M. Orfila afterwards shows the differences which poison, when mixed with food of various kinds, presents with the same re-agents.

But what most concerns our art and the public security, is the indication of the best methods of arresting the action or incipient effects of poisons, and of remedying the disorders which they have already produced on the animal economy.

We think it right to observe, that we have promoted, of late years, to the degree of Doctor of Medicine, several Spaniards of the greatest promise. They have sustained, in the midst of us, by the lustre of their talents, a valuable portion of the national honour: while the majority of their fellow countrymen, full of the recollection of the valorous achievements of their ancestors, have broken the yoke which was in vain attempted to be imposed on them.

The Bulletin of the Faculty and of the Society of Medicine, the editing of which is confided to Professor Dumeril, has communicated to the world, more or less in detail, whatever has been most interesting to the profession. We may remark in particular, in a recent number, the extract of an observation on the ligature of the external iliac artery, communicated by M. Bouchet, chief surgeon to the Hotel Dieu of Lyons. This fact, with the manner in which it was brought forward, and the reflections which it occasioned in the Society, remind us of the most flourishing days of the old Royal Academy of Surgery.

I must now call your attention to the losses which we have

experienced. We have already observed, that the faculty of medicine, and the society formed in its bosom, are indissolubly knit together. It is thus, as a member of the society which forms part of our school, that I shall express our common regret for the loss of one who honoured me with his particular regard, Charles Louis Dumas. When upon the death of Grimaud, cut off from his professional career at the age of thirty-seven, it was you, Dumas, who placed yourself in the ranks to succeed him; you saw, without regret, the crown adjudged to Fouquet, who at the age of sixty-five could no longer have any rivals. Another chair became vacant by the death of M. Sabatier, and the keeper of the seals of France, who honoured you with his esteem, wished you to fill it. Afraid, lest it should appear that you were indebted to favour, and not to your own merits, you scrupled not to re-descend into the arena.

The writings of Dumas may be classed under three different heads. The first belong to the institutions or elements, and are purely anatomical or anatomico-physiological; the second relate to practical medicine; and the third class is composed of various isolated pieces, such as memoirs, observations, discourses, and eloges.

We shall take a cursory view of these various productions, not according to the division which we have established, but in chronological order, which will best exhibit the progress and history of his mind.

Dumas made his debut in 1785, at the age of twenty only, by an inaugural dissertation upon "Life." This first performance indicates the direction which his mind took and constantly preserved from that moment.

A short time afterwards, he was a candidate for a prize proposed by the Royal Society of Medicine. It was required "to determine in what species, and at what period, of chronic diseases, fever may be useful or dangerous, and with what precaution we ought to excite or moderate it in their treatment." The memoir published by Dumas on this occasion is a judicious selection of the opinions of the best authors. Before the age of experience, we can only resolve similar questions in this way. The prize was divided between Dumas and M. Pujol, formerly a practitioner at Castres in Languedoc.

Dumas published, for the competition of the year 1790, to which we have alluded, a Series of Theses, which, conformably to the custom of the faculty of Montpellier, were composed, distributed, and sustained, within the space of fifteen days.

In 1791, Dumas gave an edition of the "Complete Course of Fevers," of the late De Grimaud, in 4 vols. 8vo. conformably to an autograph copy specified in the testament of the estimable author. Dumas was anticipated a few months or weeks by a self-elected editor, who, without delicacy, published the same work in three volumes only, and in the same form. The opinions of medical men are divided as to the merit of the two editions.

Dumas was associated the same year with M. Petit D'Arsen, in translating "An Essay on the Nature and Treatment of Pulmonary Consumption;" written in English by Thomas Reid. This work contains only one fact and its inductions. This fact is, that the vomiting arising from sea-sickness has been known to give relief in incipient phthisis. The inductions are, that repeated emetics, in small doses, might be useful in the treatment of the same disease, and in the same stage. Without discussing the merits of the original work, we may affirm, that the translators, by adding a preface and notes, have succeeded in making a far better book.

Elected professor of Anatomy and Physiology in 1795, Dumas published in 1797, in 1 vol. 4to. a Treatise on Myology, after the manner of Winslow, Albinus, and Chaussier. This work is entitled, "Methodical System of the Nomenclature and Classification of the Muscles of the Human Body, with Descriptive Tables for recalling their Ancient Names, their New Names, Situation, Attachments, Direction, Composition, Figure, Connection, and Use." A dictionary containing the whole *synonymy* of the muscles terminates this treatise. It is an imitation and an extension of the work of one of our colleagues, whom we have mentioned constantly, preceded by general principles and reflections on the formation of languages.

Dumas published, in 1800, and in 4 vols. 8vo. his Principles of Physiology, or Introduction to the Experimental, Philosophical, and Medical Knowledge of the Living Man." He brings forward with address whatever was most important on

this subject, grounding his opinions in preference upon the writings of Stahl, Haller, and Grimaud. Another person, who approached in some respects the first, who, in point of erudition, equalled the second, and who surpassed the third in every respect, (I mean Barthey,) was offended at the silence of Dumas, who, in borrowing several of his ideas, had forgotten to acknowledge their author. Barthey had a right to complain, and he did so, with that air of authority which was peculiar to him, and which he but too strictly maintained in this discussion.

I pass over slightly the "Physiological Sketch on the Transformation of the Organs."—*Journal de Physique*, 1805 and 1806. To believe that the stomach can fulfil the functions of the brain, and *vice versâ*, the brain those of the stomach, would be to return to the chimerical ideas of Paracelsus and Van Helmont. It was quite in a different spirit that Dumas published an observation, that does great honour to his talents, on the subject of an epilepsy rendered intermittent, and afterwards cured by the administration of bark.—*Journal de Medicine.*

Dumas pronounced, in 1804, a Discourse on the future Progress of the Science of Man. His hopes were founded on the continuation of the application of analysis, and the perfection of the faculty of observation.

A new edition of his Physiology, as before in 4 vols. 8vo, appeared in 1806.

The Eloges of Fouquet and Dorthey, published, the first in 1807, and the second in 1808, are two papers which do equal honour to the head and heart of Dumas. He had, it is true, in praising the former, merely to repeat what medical Europe had proclaimed for thirty years; but he had to make known in the latter a man nearly of the same age with himself, a former competitor for the same chair, and a rival for glory in the same school; although Dorthey, in a more especial manner, cultivated other branches of the natural sciences, in which he has left a great name.

We now come to a period of his life when Dumas published a work more original, and more peculiarly his own, if I may be allowed the expression, than any of the foregoing. It is the best of his productions, and also the last.

The treatise of Dumas on "Chronic Diseases," is divided into four parts. In the first, he explains the essential phenomena of these diseases, and the differences which exist between them and acute diseases. The second part explains the theory of the formation of chronic diseases. In the third part, he examines the modifications produced in diseases, by age, sex, passions, and influence of climate. The last and fourth part exhibits the application of the distinction of the elementary affections to the treatment of diseases.

This work, although very extensive, remained imperfect until it was followed by a volume of developments and applications to a great number of observations. When Dumas wrote this treatise, which appeared at Paris in 1812, he enjoyed a high reputation, which could only be increased by it: he was surrounded by that consideration which his talents and his eminent social qualities merited. Finally, he was loaded with academical, literary, and other honours of every kind, when he died at Montpelier, on the third of April, 1813, at the age of forty-seven.

We have still another heavy loss to deplore, and it is still more recent and more premature; we mean that of Julien-Jean-Cæsar Le Gallois, who died in February last.

Professor Dumeril has already published a very interesting account of Le Gallois. The son of an honest agriculturalist in easy circumstances, he received a liberal education: he gave early signs of talent, and, on finishing his studies, he felt a *penchant* for medicine, which he studied in the university of Caen, which reckoned, among its medical professors, Chibourg, Le Canu, and Rousell, and which had produced Vicq-d'Azyr, Thouret, and Vauquelin. The revolution about this period assumed a most frightful shape. Those who still retained some sentiments of commiseration and some ideas of equity, and the young in particular, burning with indignation, ranged themselves under the standard of a party which has since been distinguished—that of *Federalism*. Le Gallois became, under these circumstances, one of the leaders of the students. It is useless, impolitic, and perhaps dangerous, to dwell upon those times of calamity: suffice it to say, that the party in question was crushed in Calvados as well as throughout France, and that

Le Gallois, obliged to fly, hid himself, first at Paris, where he was discovered; that he took refuge among the sciences, and was so fortunate as to be employed in the manufacture of saltpetre in a department at a distance from the capital. Upon the formation of the three schools of medicine he returned to Paris, where he was received as one of the pupils from the departments; among his fellow students, he was distinguished, and began by fixing the attention of the learned world upon him by his Thesis for the doctorate on the following question: "Is the blood identically the same in all the vessels which it passes through?" This production announced a man of science, who was determined to proceed in his studies by the thorny, but otherwise fertile, road of experience.

Le Gallois shortly afterwards took part in the discussions occasioned by the famous thesis of Boulet, who, in an ingenious and erudite paradox, threw some doubt on the existence of Hippocrates.

Suddenly, a grand idea struck Le Gallois and absorbed all the faculties of his mind. He sought for the solution of the boldest problem,—for he sought nothing less than the discovery of the principle of life!

The history of the sciences exhibits to us the first chemists as almost all occupied for centuries with the transmutation of the metals and the universal panacea. They could neither create gold nor prolong the life of men, and yet they enriched the arts with numerous useful processes, and medicine with several very powerful remedies.

Le Gallois did not succeed any more than they in determining in what life precisely consists; and, perhaps, it is not given to the feeble intelligence of man to discover the primordial laws of the great phenomena of our organization; but, in seeking for the solution of a question still undecided, Le Gallois threw great light on several very important points in physiology. He is, in this respect, the most distinguished man which our school has produced since Bichat.

The labours of Le Gallois are contained in a work entitled "Experiments on the Principle of Life, particularly on that of the Motion of the Heart, and on the Seat of this Principle." This valuable collection of facts has produced a work equally

important; viz. the report made on this subject to the first class of the Institute, by Baron Humboldt, so dear to the sciences on many accounts, and by our colleagues, Halle and Percy; these gentlemen caused to be repeated before them, first, the series of experiments relative to the principle of the inspiratory movements; secondly, the experiments relative to the principle of the powers of the heart. But these subjects cannot be analyzed in the present discourse.

Le Gallois has also left a work on the teeth of the rabbit and the guinea-pig, on the duration of gestation in the latter animal, and on the relaxation of the symphysis pubis at the moment of parturition. The observations and experiments on these various subjects were made while Le Gallois was enquiring into the principle of life.

The result of all his enquiries and experiments relative to circulation are also printed in the excellent article Heart, (*Cœur*,) which Le Gallois supplied for the New Dictionary of the Medical Sciences, which reckons among its authors several professors of this faculty, and almost all the most distinguished physicians and surgeons of this capital.

Le Gallois, who was qualified by his education and talents to practise either surgery or medicine, adhered to the latter branch of the healing art. He had been nearly a twelvemonth physician to the Bicetre. He lived in Paris, and it was when proceeding on foot to his duty, as he frequently did, that he was attacked by a peripneumonia, to which he fell a victim in the beginning of February last year, leaving an interesting family inconsolable for his loss.

We have to express our regret that we cannot detain you a few minutes longer by detailing at full length the life of Villars, dean of the faculty of medicine of Strasburg, and associate of our society of medicine, who died on the 27th of June last.

The details of his life would exhibit to your view a man deprived almost from birth of all hope of acquiring the slightest knowledge of letters. You would see afterwards by what difficult bye-paths, and how, with talents almost entirely flowing from nature, he attained an honourable place among the physicians, and particularly the most distinguished botanists of the day.

The intimacy of Villars, in his youth, with J. J. Rousseau; his zeal for the instruction of the numerous pupils whose minds he formed; his humane attentions to the sick as physician to a great military hospital, or as a practitioner among all classes of society, will present some affecting traits to whoever shall draw up his eloge with all the extent it deserves.

Let us no longer withhold the recompenses which await those, who at the last exhibition of our practical school ought to be preserved as examples for the emulation of their fellow students.

This last exhibition has not been in truth so numerously attended as on other occasions, and the candidates have not given the same proofs of proficiency as in preceding years. He whose name was first called, was a convalescent from a severe disease contracted in the hospital, when he underwent his examination. The other candidates who will receive prizes after him, whatever be the place which they occupy, are equally worthy of encouragement and indulgence, both on account of their exertions and of the arduous circumstances in which they found themselves at the end of the last and the beginning of the present year.

Report of the State of Vaccination in Sweden. (Translated from the Original in Swedish.) Ordered, by the British House of Commons, to be printed, July 19, 1814.

[From the London New Medical and Physical Journal, for September, 1814.]

On the 14th of January, 1814, Mr. Macmichael, an English gentleman, attended the Royal College of Health in Stockholm, and delivered to the college a copy of the Report of the National Vaccine Establishment in London, dated the 22d April, 1813, and presented to Lord Sidmouth, secretary of state for the Home Department; at the same time he requested, that a short account of the progress of vaccination in Sweden, and of the measures which had been adopted for its promotion, might be communicated to him, for the information of the British Parliament.

The Royal College had particular satisfaction in receiving

Mr. Macmichael, and undertook to comply with his request so much the more readily, as it had the pleasure of numbering among its honorary members the respectable name of Dr. Jenner, for whom it was reserved to demonstrate, by the most decisive experiments, the protective power of the cow pox against the most terrible and destructive contagion of the small pox; a pestilence, which, by means of this blessed discovery, must certainly be ultimately extirpated from the face of the earth.

It was to be expected, from the excellent arrangements which the kings of Sweden had adopted for somewhat more than half a century, in every department of medical science, that the incomparable discovery of Dr. Jenner, like the inoculation for the small pox at a former period,* should not only become an object of the most accurate investigation, but also, when approved by experience, be generally introduced and promoted by rewards and established regulations.

The medical practitioners of Sweden, who had already been informed, from the time of Dr. Jenner's first discovery, by means of a constant correspondence with the learned in other countries, of the expectations which were entertained of the success of experiments made with the cow pox, had great pleasure in learning that one of their colleagues, Dr. Gahn, a member of the Royal College, had, towards the end of 1799, procured some vaccine matter, and obtained the most satisfactory result from inoculating with it. Another Swedish physician, now professor of medicine, Dr. Rosensköld, printed in 1801 a small pamphlet, entitled "To the Public on the Cow Pox;" and performed vaccination with success in several parishes in Skäne. About the same time the undersigned also published a more detailed account, with coloured figures, under the title, "The Small Pox may be extirpated;" and this essay was distributed to all the churches in the kingdom.

The government, already attentive to the inestimable advan-

* It is remarkable, that the celebrated Dr. David Schultzenheim, who was appointed as long ago as 1754, by the states of the kingdom, to inquire into Sutton's and Dimsdale's mode of inoculating the small pox in England, is now the president of the Royal College of Health, and has been the most instrumental, by means of his powerful influence, in promoting the most salutary measures for the introduction of vaccination.

tage, which the inoculation of the cow pox seemed to promise, directed the college to examine Dr. Jenner's discovery with the greatest accuracy, for which the proper means were immediately afforded; and the college was ordered, after collecting the results, to present its report to the king.

This report, which fully confirmed the excellence of the Jennerian discovery, occasioned the salutary law which was first enacted in 1803, by which vaccination was established throughout the kingdom; and the college was commanded to promote its adoption by all possible means. The king was pleased to appropriate 900 dollars, spec. banco, to be divided into premiums, which were to be distributed among such medical men as could exhibit the greatest number of vaccinated persons.

A particular regulation was made for the metropolis, imposing a fine of three dollars on any one, who should fail to announce to the medical officer of the district, the appearance of the contagion of the small pox; and in every such case, the person infected was to be carried to the Small Pox Hospital, where every measure was adopted for his being properly nursed; and the same precautions have been continued to the present time.

It was long a question, whether new-born children could be vaccinated with success, and whether the matter taken from them might be employed with as much security as if taken from adults.

This doubt has been altogether removed, and in the General Lying-in Hospital all the children are now vaccinated within nine days from the time of their birth; so that, by means of this progressive vaccination, fresh matter remains constantly in existence.

The want of a sufficient supply of vaccine matter for the extensive provinces of the kingdom, was long an obstacle to the universality of vaccination in Sweden. The obstacle no longer exists; since the Royal College of Health, in consequence of the humble representations which it made to the king, obtained the adoption of a very effectual measure for this purpose, in the appointment of a particular establishment for the general regulation of vaccination throughout the kingdom; which took place in the year 1812.

This establishment consists of a director, and several inspectors of the stations for vaccination in the provinces. The director is a member of the Royal College of Health, whom the king has graciously commanded to receive and examine all reports, to answer all inquiries, to conduct the distribution of vaccine matter, which is delivered, free of postage, to all persons who apply for it; and lastly, to report to the college every thing relating to vaccination that requires further regulation, and to propose to it, as proper persons to receive rewards, all those who appear to be the most deserving. He has also the immediate inspection of all the medical men, who are appointed to conduct the business of the stations, established in almost every province; the progressive vaccination performed at these stations being calculated to maintain a constant supply of fresh matter, which is also distributed, free of postage, to those who require it; and their proceedings being registered in proper catalogues and journals.

In Stockholm, three several stations of this kind have been appointed, whence fresh matter may always be procured with certainty, if it happens to be wanting in any particular province.

The archbishop, bishops and the whole of the clergy throughout the kingdom, having, from the time of the happy discovery of Vaccination, embraced it with the most distinguished zeal; and many of this respectable body having not only employed the most effectual means for the removal of vulgar prejudices against it, but having even actually practised vaccination themselves; the king, assured of the continued exertions of the clergy in the same cause, was pleased to direct, that every minister should superintend the progress of vaccination within his parish; and should be empowered to call to his assistance one or more inspectors of vaccination, according to circumstances, for the purpose of causing all children to be properly vaccinated within the first year after their birth, and keeping proper documents of the performance of the operation. In each parish or district there must be an accredited vaccinator, whose duty is to perform vaccination, and to give a report of his proceedings to the Royal College of Health.

The college has also published, by the king's command, a

book of instructions for vaccinators and inspectors of vaccination, which has been distributed gratis to all the churches in the kingdom. This treatise, adapted to the use of the public, affords an accurate knowledge of the true and false cow pox; of the varieties which most frequently occur in it; and of the cutaneous diseases, which occur so often in Sweden, very nearly resembling the small pox.

For the more effectual encouragement of the practice of vaccination, the king has been graciously pleased to appoint rewards of two different kinds, pecuniary premiums and honorary medals. The latter are distributed commonly in silver, but sometimes in gold, to those who have particularly distinguished themselves. In all cases, those who have deserved rewards are humbly pointed out to the king by the College of Health; and his majesty has reserved to himself the right of assigning the proportions in which those rewards shall be distributed. It is also in the king's name, and with a certain degree of publicity, that these marks of his approbation are bestowed.

For the honour of the medical profession in Sweden, it must not be forgotten, that although inoculation for the small pox was one of the most lucrative branches of their private practice, and has been entirely superseded by the simple process of vaccination, no one individual of the profession has raised any obstacles against the cow pox; but every one has contributed to its advancement, by giving advice, information and assistance, to the utmost of his ability. No single publication has appeared to call in question its high importance,* and its superiority to variolous inoculation; which has been entirely discontinued ever since the year 1802, rather by a tacit and universal consent, than in consequence of any royal prohibition.

*The answer which the undersigned returned, the 1st Nov. 1801, to a letter addressed to him, by the Vaccine Committee of the Society of Medicine at Paris, and which is inserted in the second report of that committee, cannot justly be considered as a publication of this kind. It was not quite three months after this time, that having acquired perfect confidence from inoculating a cow with the cow pox, and transferring the operation to the human subject, he published the before-mentioned Essay, entitled "The Small Pox may be extirpated."

It may therefore be asserted, that the small pox, that equally disgusting and destructive pestilence, which for many ages continued annually to send out of the world an immense number of young children, is now, through the influence of Dr. Jenner's inestimable discovery, so perfectly extirpated in Sweden, that it never can become epidemic, even if at any time, notwithstanding all the orders and all the vigilance employed for its exclusion, the infection should make its appearance. Such, in the last twelve years, has been the effect of the king's wise and humane attention, of the unanimity and disinterestedness of the medical profession, of the patriotic zeal of the clergy, of the good examples so promptly exhibited by the upper classes, and of the progress of information and civilization in the lower.

The undersigned, who has drawn up this short account at the request of the Royal College of Health, has also the honour of sending with it, in the name of the college, a copy of the Book of Instructions, and an impression in silver of the honorary medal, which was struck by the king's command, under the direction of the college, and which is distributed in the king's name for the promotion of vaccination.

FR. HEDIN, M. D.

First physician to the king, medical counsellor, &c.

Stockholm, 10th February, 1814.

The French Dictionary of Medical Sciences.

[From the London New Medical and Physical Journal, for July 181 .]

We feel no common gratification in announcing to the medical profession, the appearance of this interesting and important work. It promises to form a fair, if not splendid monument, of the talent and industry of our enlightened neighbours in those departments of human acquirement, the consideration of which, as allied to the philosophy of medicine, it exclusively involves.

Two years have now passed away since the publication of the first volume of the French Medical Dictionary was announced in Britain. In the spring of 1813, four volumes had

reached this country: the importation of others we have long and anxiously anticipated.

The French Dictionary of Medical Sciences is the joint undertaking of a Society of Physicians and Surgeons. An enumeration of fifty-eight members of this Society, all, we believe, distinguished in their respective departments, is presented upon the title page. Many among them, whose reputation shall only perish with the science which they have arisen to illumine and adorn, we most joyfully recognise. With the enlightened and philosophic of our own isles, the names of Alibert, Boyer, Chaussier; of Cuvier, Gall, and Hallé; of Larrey, Le Gallois, Petit; of Pinel, of Richerand, and Spurzheim, must be held in pleasing remembrance. We cannot let them pass, without offering to their talents this feeble tribute of our applause and veneration.

To those who may withhold the tribute of respect and veneration at the shrine of French medical genius, we beg leave to recommend the frequent recollection of a few not very despicable names:—the great Desault, the zealous Vicq-d'Azyr, the learned and philosophic Cabanis, the memorable Bichat, over whose untimely grave the lament of science shall long be heard. We would have them remember that, in addition to the enlightened phalanx, whose labours are now before us, France also boasts her Corvisart, her Portal, her Sabatier; besides numerous other men, whose talents and productions shed no feeble light upon the various paths of medical improvement, to which their inquiries have been directed. Were farther proof of the justice of our eulogies wanting, it might be aptly educed from many luminous and finely-written articles in the volumes now under consideration. Those on medical police, on medicine, as connected with the science of war, and on every branch of natural philosophy, in which medicine is interested, generally exhibit, in our opinion, features of distinguished excellence.

Amid the varied reflections, to which our perusal of the French Dictionary of Medical Sciences has given rise, we must not forget to mention, that the editors propose its completion in twelve closely-printed octavo volumes. Those which

we have already received contain each, upon the average, about 600 pages. The work is written, as its title indicates, in alphabetic order; and, at the close of the fourth volume, the letter C is scarcely half completed.

Experiment on Respiration, which had nearly proved fatal.—Beneficial Effects of Oxygen Gas in restoring suspended Animation; by SAMUEL WITTER, Esq. Dublin.

The following case occurred very lately in the laboratory of the Dublin Society, and excited considerable interest.—When a mixture of carbonate of lime and zinc, or iron filings, is exposed to an intense heat, the peculiar gaseous substance named carbonic oxide is disengaged, which has been stated to bear the same relation to carbonic acid that nitrous gas does to nitric acid. But agreeably to the striking observations of Mr. Higgins, professor of chemistry to the Dublin Society, in his work recently published, wherein his claim to the discovery of the atomic system is unequivocally established, it would appear that, in the combination of oxygen with different gases, it is the atom of oxygen only that is found multiplied, as is beautifully exemplified in all the metallic oxides, acids, and gases. An apparent anomaly has been noticed with respect to nitrous oxide, which the experiments of Mr. Higgins on the composition of nitrous gas tend to obviate, and sanction a comparison of the proportions of carbon and oxygen in carbonic oxide with those of azote and oxygen in nitrous oxide, rather than the atomic coincidence of carbonic oxide and nitrous gas. Carbonic oxide was discovered and described by Mr. Cruickshank in 1801; it is highly combustible, burning with a fine blue flame, but is utterly incapable of supporting animal life.

The diversified experiments of Sir H. Davy on the respiration of nitrous oxide and some other gases, so interestingly described in his scientific researches in 1800, in a great measure dissipated the general apprehensions of fatality resulting from the inhalation of compound gases, and satisfactorily de-

monstrated that many of the aërial fluids, before considered as destructive to vitality, might be breathed with perfect safety.

Desirous of witnessing the progressive effects of carbonic oxide when freely respired, with a view to comparative analogy in reference to nitrous oxide, I was tempted a few days ago to inhale a portion of it as copiously as possible. The consequence had very nearly proved fatal to me. A considerable quantity of the gas having been carefully prepared by Mr. S. Warmby, the very ingenious and able assistant to Mr. Professor Higgins, a series of experiments on its respiration were proposed. Mr. Warmby first noticed some points of resemblance it bore to the nitrous oxide, particularly the singularly sweetish taste, and, having made two or three inspirations, was seized with a degree of convulsive tremor and giddiness that nearly overpowered sensibility. These violent effects were but transient, though considerable languor, headache, and debility, remained for many hours afterwards. Anxious to pursue the experiment still further, I next made three or four hearty inspirations of the gas, having first exhausted my lungs of common air as completely as possible. The effects were an inconceivably sudden deprivation of sense and volition. I fell supine and motionless on the floor, and continued in a state of total insensibility for nearly half an hour, apparently lifeless, pulsation being nearly extinct. Several medical men being present, various means were employed for my restoration, without success; when the introduction of oxygen gas by compression into the lungs was suggested, the effects of which may be fairly contrasted with those of the carbonic oxide. A very rapid return of animation ensued, though accompanied by convulsive agitations, excessive headache, and quick irregular pulsation; and, for some time after mental recovery, total blindness, extreme sickness, and vertigo, with alternations of heat and shivering cold, were painfully experienced. These unfavourable spasms were succeeded by an unconquerable propensity to sleep, which, as might be expected, was broken and feverish. An emetic of tartarised antimony finally removed these alarming symptoms, and the only unpleasant effects felt on the ensuing day were those occasioned by the fall.

I very much regret that the confusion arising from the idea

of my death, so disturbed the arrangement, that no accurate determination could afterwards be made, either of the quantity of gas respired, or the change it underwent in the process; and the experiment is rather too hazardous for repetition. Nevertheless, the extraordinary efficacy of oxygen gas in cases of suspended animation produced by carbonic acid, choke damps, and other suffocating gases, is fairly deducible, and, I conceive, cannot be too forcibly recommended to the faculty, in such instances. I therefore sincerely hope that the results of this experiment may be of practical utility in those cases, which are so frequently occurring, and are often so awfully fatal; it being the decided opinion of the professional gentlemen present on this occasion, that the free use of the oxygen gas was solely instrumental in restoring me to life.

Mr. Higgins himself had nearly once fallen a victim to a similar experiment with sulphuretted hydrogen, the effects of which, after recovering from a death-like insensibility, were painful and oppressive for many days.—*Philosophical Journal.*

M. Bucholz has recently analyzed a new bitumen found in the environs of Halle in Saxony, which he thinks strongly resembles the *resino asphaltum* described by Mr. Hatchett some years ago in the Philosophical Transactions. According to M. Bucholz, that which is found at Halle is composed of two resins, one of which is very soluble in alkohol, and approaches to the vegetable resins, forming 91 parts of the bitumen; while the other, which forms nine parts, has some analogy to amber.

The following are a few of the most characteristic marks of this substance: It is found in balls the size of an apple, enveloped in gray crystallized gypsum; in colour it is brownish, or pale yellow; fracture glossy, and very brittle: it does not become soft under the fingers; it even does not melt so easily as other resins, but while melting it exhales an agreeable smell, something like that of animal resin and styrax. M. Bucholz remarks that, as Mr. Hatchett could dissolve only 55 parts of the bitumen examined by him, while the former dissolved 91, it is extremely probable that this difference was occasioned by Mr. Hatchett's using common alkohol.

The nine grains which were insoluble in alkohol were dissolved, but with much difficulty, in boiling oil. It was fusible in a strong heat, and gave out the smell of common resin.

The 91 parts above mentioned, when separated from the alkoholic solution, were dissolved by ether, and formed a brownish tincture, while ether of a specific gravity of 0·710, rectified over muriate of lime, made scarcely any impression. Oil of turpentine and rectified petroleum have little or no effect upon this resin. Caustic potash dissolved in two parts of water does not dissolve this resin; but, when the lixivium is decanted, the residue of the resinous principle is dissolved in water, from which we can separate the resin by the addition of muriatic acid.—*London Medical and Physical Journal for July*, 1814.

Royal Society.—On Thursday, the 12th of May, a paper by Dr. Benjamin Hayne on the Indian method of oxydizing silver by means of the juice of jatropha cureas, and on the milk of plants, was read. A piece of silver is heated to redness, wrapped in the leaves of any kind of tree, and then quenched in the juice of the jatropha moluccana. This process is repeated about twenty times, taking care never to fuse the silver. The metal becomes quite brittle, and crumbles to powder between the fingers. Dr. Hayne tried the same process, substituting water instead of the vegetable juice, and a similar effect was produced. From Dr. Hayne's account of the above process, Dr. Thomson suspects that the silver is not oxydized, but merely rendered brittle, and reduced to a fine powder; probably by combining with something which exists in the vegetable juice employed, or rather in the cow-dung in which the silver is heated. The only known oxide of silver is a dark greenish brown powder, which is reduced to the metallic state by a very moderate heat. If the vegetable juice merely communicated oxygen, it is obvious that that principle would be driven off every time the metal was heated to redness, so that the process would never advance; but if the vegetable juice or cow-dung employed, supplied sulphur, or any analogous principle, we can see how the repeated heatings would facilitate the combination, and how fusion would retard it.—*Ibid.*

Extract of a letter from M. Van Mons to Mr. Tilloch.

[From the Philosophical Magazine and Journal for January, 1815.]

SIR,

"YOU are probably acquainted with the new discoveries made at Milan, by Messrs. Moscati and Maury, relative to the sun, its diurnal or rotatory motion, its volcanos, &c. I send you a translation of the report published on this head; I also send you a note to what I have said on the metallo-fluores, and another on my new theory, which is that of caloric considered as a constituent part of all bodies containing oxygen, displaced in the combinations and displacing itself in the decombinations. Afterwards I admit hydrogen reduced into its gas into all the combustible bodies, and into the metals, and subsaturated in all bodies which can, in their quality of bases, contract combinations. Hydrogen gas is a simple body; oxygen gas is composed of equal parts of oxygen and of caloric: the primitive material of the globe, and without doubt the substance of the other planets, also consists of equal parts of oxygen and hydrogen, without the least quantity of caloric, which would break this relation: water is oxygen gas displaced in the ratio of $\frac{2}{15}$ from its caloric by two of hydrogen, and there result in this way 15 parts of oxygen, 13 of caloric, and 2 of hydrogen. The metals compose the primitive matter of the globe, with more or less hydrogen, and still without the least portion of caloric. The acidifiable combustibles are dry acids and hydrogen; the salifiable combustibles, or metallo-fluores, are an acid and the metals; the acidifiable burners (*comburans*) are dry acids and oxygen; the common acids are dry acids and water; and the dry acids themselves are peculiar combustibles in which the hydrogen is saturated by at least double the quantity of oxygen that it is in water; which may combine all the other bodies, but which cannot be put out of combination. All the other bodies are compounded of the latter. Water is decomposable by luminous caloric only; and when it oxidates bodies, it puts itself in the place of the equivalent of its contents in hydrogen, in the same way as, when hydrogen reduces bodies, it puts itself in the place of the water. I embrace the

whole domain of chemistry in this manner: Will you have the goodness to submit my ideas to the penetration of men of science in your country?

"M. Dobereiner, of Jena, not having found any soda which contained iodine, sought for this substance in sea water, where he found it. The *intactile powder* is iodate hyperoxygenated by ammonia, as *detonating oil* is muriate hyperoxygenated with the same alkali. The iodate of ammonia may be formed by simple oxygenation, whereas the muriate of ammonia requires to be hyperoxygenated.

"You will be soon made acquainted with an experiment in which muriate of ammonia, obtained by the combination of its gaseous elements, deposited all the water from its acid, taking up in its stead muriate of mercury and *oxydule*. This fact is decisive for the existence of oxygen in chlorine, and triumphant for Mr. Murray.

"You will also find that the Prussic acid gas, and water and alkohol impregnated with this gas, kill, in the most insignificant doses, and in three minutes, without convulsions, and as if a profound sleep had come on.

"I have ascertained that the essential oils which are distilled with alkohol or ether, cannot be again completely separated from those liquids, but retain at least the third of their weight: whether we attempt their precipitation by water, or try to make them float to the surface in the cold way.

"We have at Bruxelles a pile of Zamboni, which I have described in my French translation of Davy's Chemistry. It consists of disks of the diameter of a guinea, which are inclosed with pressure in two glass tubes of the form of columns. The substance of the disks is gilt paper sprinkled with native oxide of manganese, a vertical needle half a foot long, which is suspended about the sixth of its length towards the bottom, and oscillates between the two columns, striking at each half oscillation two bells with which the columns are surmounted. This movement, which is not much different in point of rapidity from the pendulum of a clock of the same length, has now existed for seven months: it is a true perpetual motion arising from a physical impulse. The circulation ascends this pile dry, and no chemical composition exhausts it.

"There has been lately found in the calcareous stone of Chimaii, which is a blue bituminous shell-stone, a living toad of supernatural size. Has this animal been surprised in the formation of the stone, or has the stone generated it? It is conceivable that, by exclusion from the air, vitality might be only suspended, but then the substance of the stone must have nourished it to make it grow."

State of Medicine in China.

M. Page, a physician of Orleans in France, has published a work on this subject. The following short account of the Chinese medical practice will probably amuse some of our readers:

"The Chinese employ emetics and purgatives, but very rarely; clysters are almost never used, because they regard them as too European, but they make a free use of cordials. The importation of opium is prohibited under pain of death.

"The Chinese in the treatment of the itch and eruptive diseases employ camphor and cinnabar also, with sulphur dissolved in woman's milk. They make use of borax in inflammations of the throat; it is reduced into powder, and blown upon the diseased part. They borrowed the use of the bark from the Jesuit missionaries.

"They were acquainted with inoculation long before us. They practise it in general by introducing into one of the nostrils cotton imbibed with variolous matter: the cotton is allowed to remain twelve hours, and in seven days at latest the disease appears.

"Like most Indian nations, they make a free use of aphrodisiacs, baths and mineral waters. They have springs saturated with alum and iron, but the greater number contain sulphur. Their physicians are not able to analyse them. Chemistry as well as natural history is in its infancy in China. But the Chinese have the good fortune to possess a species of *mesmerism* or animal magnetism, as practised by certain sects of Illuminati in Germany. The Chinese literati strive to put down this sect by ridicule; but they nevertheless find proselytes daily, to what they are pleased to call the *science of sciences*.

"The Chinese are not acquainted with the making of bread, for which they substitute boiled rice or maize: their wine is a strong liquor extracted from honey or fermented rice. They do not drink either coffee or chocolate—they have delicious melons, the species of which is unknown to us, some very delicate kinds of small onions, and several delicious plants; but they have no olives, strawberries, gooseberries, or potatoes.

"The diseases of stone and gravel are wholly unknown to the Chinese—in consequence, as they tell us, of the great quantity of tea which they drink."*

Tannin.

M. Pelletier has published in the *Annales de Chimie* some observations with a view to show the imperfect state of our knowledge of this substance and its combinations with gallic acid. The various kinds of tannin which have been successively produced from various processes, are different in the greater part of their properties: they have nothing indeed in common, but the property of several animal substances, and forming with them insoluble combinations which are not susceptible of putrefaction, and have also the power of precipitating in a manner nearly similar even metallic solutions; but they are different in their taste, colour, solubility in water, &c. Pure tannin does not exist: the properties which are attributed to it, and by which it is characterized, belonged to several combinations which vegetable substances form. Why then, asks M. Pelletier, shall we continue to consider this as a distinct principle?

Is it because it precipitates several metallic oxides from their solution? Almost all vegetable extracts have the same property, and we know that these extracts are at least triple combinations of acid, the colouring substance, and of vegeto-anima lmatter, because the precipitates which form the tannin matter in those solutions are constantly coloured and sometimes very brilliant. But if we reflect that gallic acid always accompanies tannin, and that the colours of the precipitates

* The great consumption of tea in England is well known: are the affections arising from urinary calculi less frequent in that country? We may form some idea on this subject by reading the papers of Brande, Home, and Hatchett.—*Note by the French Editors of the Annale de Chimie.*

furnished by the tanning matter, and the metallic solutions, are the same with those manifested by the addition of the gallic acid, and the same metallic solutions; may we not conclude with M. Thenard, that the colouring of these precipitates is owing to the gallic acid, from which we can never entirely separate tannin? or is it the property which tannin has of combining with animal matter and preserving it from putridity? A multiplicity of combinations of vegetable matter also possess this property; and without mentioning the astringent matter formed by the action of mineral acids on charcoal and several vegetable substances, or the experiments of M. Chevreul on *hematine* (which acquired this property) and who disbelieves the existence of tannin, I shall mention some facts to prove that gallic acid can combine with several vegetable substances, and thus acquire the properties of tannin. If we put a solution of pure gelatine in gallic acid, no precipitate is formed: this acid does not produce any turbidness in the gummy solutions, but they cannot be resolved without immediately becoming turbid in white flakes which are soon precipitated. Among the pharmaceutical extracts there is a great number which do not contain the astringent principle, and which form no precipitate in the solution of gelatine; but by the addition of gallic acid they acquire this property. The same phænomenon does not take place with the other vegetable acids, which on the contrary seem to oppose themselves to the precipitation of gelatine.

We know that pure gallic acid forms no precipitate in a solution of sulphate of iron at the maximum, but it there becomes a beautiful deep-blue colour. Infusion of nut-galls produces, on the contrary, a precipitate which is attributed to tannin; but gallic acid of itself acquires the property of partly precipitating the iron from this solution when it is combined with extractive matter: most of the vegetable infusions unite with gallic acid and gelatine, the same as the extractive substances, for which we can assign no reason. The phenomenon is very perceptible with the cold infusion of saffron: the properties of these precipitates cannot be absolutely identical; they must differ according to the nature of the substances which enter into each combination: that formed by gum arabic, gelatine and gallic acid is the only one which I have hitherto been able to exa-

mine: it differs from the others by its extreme adherence to water, with which it assumes an oleaginous form, and partly passes through the paper filter. This combination, it appears, may exist in different proportions, which I have not been able yet to determine, except that it does not putrefy: whereas in the others, a fetid smell arises in a few days, and much later than if the gelatine was pure. The combinations of the gallic acid with gelatine and extractive matter unite less freely with water, and resemble much the precipitates formed by the infusion of nut-galls in the gelatinous solution.

Verdigris.

Senor Orfila has found that great quantities of dry sugar taken into the stomach of a patient who had recently swallowed verdigris, or eaten food prepared in untinned copper vessels, have proved an immediate and effectual antidote to the cupreous poison. In cases where the poison has remained so long in the stomach as to produce inflammation, the usual remedies for the latter must be conjoined with the sugar.

Detonating Oil.

The original discovery of this substance, which has been claimed by M. Dulong, and actually discovered by Davy, appears to belong to M. Van Mons of Brussels. This distinguished chemist, whose discoveries have often been appropriated by others, observed in 1793, the combination of ammonia with oxygenated muriatic acid. Nineteen years before the experiments of Dulong or Davy, he announced his discovery to Gren, in the following terms, dated Messidor, an 4 (1796): "I have succeeded in combining ammonia with oxymuriatic acid without any decomposition whatever of these two bodies. This new salt detonates at a certain degree of heat, whether in the open air, under water, or under other liquids by which it is not decomposed*." The same facts were stated in Dandolo's

* "Es ist mer gelurgen das amniak mit der oxigenirten salzsaure zu verbinden ohne dass dabey eine zersetzung dieser substanzen vorgegangen waere. Dieses neues zalz detonirt beg einem gewissen grad de waerme, sowohl in freyer luft als unter wasser und anderen tropfbaren flussigkeiten die es nicht zersetzen."—*Neues Journal der Physik.* Bd. 3. s. 230.

Italian translation of Van Mons's Chemical Philosophy, "Il muriato ossigenato d'ammoniaco si reduce à suoì principie detona à conforza anche sotto l'acqua, colla semplice impressione del calore." Van Mons's *Mémoire*, &c. to the Royal Academy of Sweden, p. 224—5.

Philosophical Transactions.

The Philosophical Transactions, part ii. for 1814, has just made its appearance, and the following are its contents:

15. On a new principle of constructing His Majesty's ships of war. By Robert Seppings, Esq. one of the Surveyors of His Majesty's Navy. Communicated by the Right Hon. Sir Joseph Banks, Bart. K. B. P. R. S.—16. Remarks on the employment of Oblique Riders, and on other alterations in the construction of Ships. Being the substance of a Report presented to the Board of Admiralty, with additional demonstrations and illustrations. By Thomas Young, M.D. For. Sec. R.S.—17. Some further Observations on Atmospherical Refraction. By Stephen Groombridge, Esq. F.R.S.—18. Propositions containing some Properties of Tangents to Circles; and of Trapeziums inscribed in Circles, and non-inscribed. Together with Propositions on the Elliptic Representations of Circles, upon a plane surface, by Perspective. By Richard Hey, L.L.D.; late Fellow of Sidney Sussex and Magdalen Colleges, in the University of Cambridge. Communicated by the Rev. Edward Balme, M.A. F.R.S.—19. On new Properties of Light exhibited in the optical Phenomena of Mother of Pearl, and other Bodies to which the superficial structure of that Substance can be communicated. By David Brewster, LL.D. F.R.S. Edin. and F.S.A. Edin. In a Letter addressed to the Right Hon. Sir Joseph Banks, Bart. K.B. P.R.S.—20. An improved method of dividing Astronomical Circles and other Instruments. By Captain Henry Kater. Communicated by Thomas Young, M.D. For. Sec. R.S.—21. Results of some recent Experiments on the Properties impressed upon Light by the Action of Glass raised to different Temperatures, and cooled under different circumstances. By David Brewster, LL.D. F.R.S. Edin. and F.A.S.E. in a Letter to the Right Hon. Sir Joseph Banks, Bart. K.B. P.R.S. &c.—22. Consi-

deration of various Points of Analysis. By John F. W. Herschel, Esq. F.R.S.—23. Observations on the Functions of the Brain. By Sir Everard Home, Bart. F.R.S.—24. Further Experiments and Observations on Iodine. By Sir H. Davy, LL.D. F.R.S. V.P.R.I.—25. Observations respecting the natural Production of Saltpetre on the walls of subterraneous and other Buildings. By John Kidd, M.D. Professor of Chemistry at Oxford. Communicated by William Hyde Wollaston, M.D. Sec. R.S.—26. On the Nature of the Salts termed triple Prussiates, and on Acids formed by the union of certain Bodies with the Elements of the Prussic Acid. By Robert Porrett, jun. Esq. Communicated by William Hyde Wollaston, M.D. Sec. R.S.—27. Some Experiments on the Combustion of the Diamond and other carbonaceous Substances. By Sir Humphry Davy, L.L.D. F.R.S. V.P.R.I.—28. Some account of the fossil Remains of an Animal more nearly allied to Fishes than any of the other Classes of Animals. By Sir Everard Home, Bart. F.R.S.—29. On an easier Mode of procuring Potassium than that which is now adopted. By Smithson Tennant, Esq. F.R.S.—30. On the influence of the Nerves upon the Action of the Arteries. By Sir Everard Home, Bart. F.R.S—31. On the Means of producing a double Distillation by the same Heat. By Smithson Tennant, Esq. F.R.S.—32. An Account of some Experiments on Arterial Heat. By John Davy, LL.D. F.R.S.—*Philosophical Magazine and Journal, November*, 1814.

Ointment for the Cure of Itch.

We some time ago noticed the employment of baths, prepared from the sulphuret of potass, for the cure of herpes; the same substance is also used with success in the form of ointment to cure the itch, as in the following formula. Sulphuret of potass, ℥vj. white soap, ℔ij. poppy oil, ℔iv. aromatic essential oil of any kind, ʒij. The sulphuret of potass is to be pounded in an iron mortar slightly heated, the powder to be passed through a sieve, and to be kept in a dry well stopped vial. The soap, finely sliced, is to be melted in an earthen vessel placed

in a sand bath; the liver of sulphur being rubbed in a marble mortar, the mixture of oil and soap is to be gradually added. When they are so thoroughly mixed, that lumps of soap can no longer be discovered, the remainder of the oil, together with the essential oil, is to be poured in, and the whole thoroughly incorporated. The ointment thus made, is to be kept in a close vessel; it is of a greenish colour and becomes white by the contact of air; its consistence nearly that of cerate. The odour of the sulphuretted hydrogen gas is entirely concealed by that of the volatile oil, which is the only reason for employing this latter. The mode of using this ointment consists in rubbing half an ounce of it upon the parts affected, night and morning; care must be taken not to suffer the ointment to remain too long a time at the bend of the elbows, or armpits, or groins, lest it should irritate and excoriate the skin. If the eruption is a simple itch, no other application, external or internal, is requisite; eight days is generally sufficient for the cure. M. Jadelot has made use of this ointment, for a whole year, in the hospital for children, without experiencing any return of the complaint or any inconvenience. This application is very easy and not at all expensive, adapted to all ages and professions, and does not require any confinement, or interruption from business.

M. M. Planche and Boullay have recommended the sulphuretted soap of soda as an effectual cure for the itch. The following is their method of preparing it: Animal soap, ℥ij. Alcohol at 38°, ℥iv. Dissolve in a gentle heat, and before the solution is quite cold, add hydrogenated sulphuret of soda concentrated to 36° (Baumé) ℥i. incorporate them well and preserve the mixture in a well stopped bottle. This sulphuretted soap is of a fine yellow colour, semi-transparent, having the aspect and consistence of solid jelly. The sulphur contained in it is in such a minute degree of division as fits it more readily for absorption; it melts with facility by the heat of the hand when employed in friction, and is very soluble in water when it is wished to make a bath from it. In either case it renders the skin soft and supple. Compositions containing the sulphuret of potass are liable to much inconvenience and uncertainty, which are obviated by making use of the sulphuret

of soda. This latter may be conveniently prepared by dissolving to saturation sublimed sulphur in a solution of pure soda. This sulphuret has the advantage of being always identical in its properties, and may be kept a long time without undergoing any alteration; it is not sensibly alkaline, and forms with all acids soluble salts which do not injure the skin. It appears that all natural sulphuretted minerals have soda for their base.

Dr. THOMANN, a German physician, uses the following ointment for the cure of the itch. Powder of fresh charcoal, ʒij. fresh butter and axunge, of each ℥iij. These are to be rubbed together, until they are completely incorporated. The patient is first to use a warm bath, and the next day to rub the affected parts with two drachms of the ointment; he is afterwards to wash himself with warm soap and water. The day following, the friction is to be repeated, and in about five or six days the disease will be radically cured.—*London New Medical and Physical Journal for Feb. and March*, 1815.

Mr. ACCUM has in the press, *A Treatise on Gas Light;* exhibiting a summary description of the apparatus and machinery best calculated for illuminating streets, houses, and public edifices, with carburetted hydrogen or coal gas; together with remarks on the utility, safety, and general nature of this new branch of civil economy. The Treatise will be illustrated with geometrical and perspective designs, exhibiting the structure of the larger gas light apparatus now successfully employed for lighting the streets and houses of the metropolis, as well as the smaller apparatus used for lighting manufactories and private establishments.—*Ibid. for March*, 1815.

From the last literary intelligence from London, it appears that the tenth volume of the French Dictionary of Medical Sciences, (of which we have given some account in this number) had reached that place. This volume embraces only the very commencement of the letter E. A considerable work on Medical Botany is announced, as a companion to the French

Dictionary; the title is *Flore du Dictionnaire des Sciences Medicales*, of which five parts had made their appearance in the month of May last.

Died, at Philadelphia, on the fifth of August, 1815, in the 42d year of his age, Dr. James Glen, for several years past a Practitioner of Physic in this city. By the premature death of this gentleman, society is deprived of the services of one of its most useful and respectable professional characters.

Dr. Glen was a native of Savannah, in the State of Georgia, and descended from one of the most ancient and respectable families of that state. After the completion of his medical education in Philadelphia, he was induced, by the delicacy of his constitution, and its inability to support a southern climate, to settle in Pennsylvania, and selected for his residence the county of Montgomery; where, by his diligence, skill and fidelity, his practice soon extended over an extensive district of country. After the expiration of some years, believing his health to be permanently established, he returned to his native state, where the liberal patronage of numerous and respectable connections, opened to him an extensive field of lucrative practice.

But he was constrained, in the course of a few years, by the declining state of his health, to return to the more congenial climate which he had left; and after spending some time in the village of Holmesburg near Philadelphia, where he married into a respectable family, he established himself in Philadelphia—here he was enabled to devote himself with renewed zeal and usefulness to the duties of his profession, and more particularly and immediately to one of its most interesting branches.

Such was the situation of this gentleman, when the hand of death, by a fatal casualty, suddenly arrested him in the career of usefulness. This event was produced by a fall from his chaise, and a consequent concussion of the brain, which, after a period of eleven days, terminated his existence.

As a professional character, the unremitting and skilful labours of Dr. Glen were justly proved and appreciated by the

high confidence reposed in him by all those who were placed under his medical care.—Uniting an unusually sound judgment with the advantages of a liberal education, and a habit of cool and dispassionate reflection, he preserved himself, throughout his practice, alike free from the trammels of ancient dogmas, and the more dangerous and seductive influence of untried and visionary theories—this rendered him a safe and successful practitioner.

In the various relations of private life, and in the exercise of all the social duties, those only could justly estimate the worth of this amiable man, who were within the more immediate circle of his intimate and selected friends. With a mind under the habitual influence of the benevolent affections, and a sincere good will for all mankind, he steadily pursued, amidst the vicissitudes of life, the tranquil and modest tenor of his way; and in the strict observance and discharge of his *sacred duties*, he was truly exemplary.

Seldom indeed, have the afflictive dispensations of Providence been more forcibly brought home to our feelings, than in the sudden removal of this amiable man from the midst of society, and from the bosom of his infant family.

At Manchester, England, aged 52, JOHN FERRIAR, M.D. one of the physicians of the Manchester Infirmary. The eminent rank which he held in his profession was founded on a long and general experience of the efficacy of his advice. He was endowed by nature with an acute and vigorous understanding, which he had matured, by a life of diligent study, and of careful and well digested observation, into a judgment unusually prompt and correct in its decisions. The purposes of his sagacious mind were pursued also with a steadiness of determination which generally secured their accomplishment; and unexpected difficulties in the treatment of diseases he encountered with firmness, and with great fertility of invention. As a professional author he had obtained a high rank, and the world is indebted to him for a large fund of valuable knowledge, conveyed in a style, which, for perspicuity, strength, and simplicity,

is a model to medical writers. These works will be his durable monument as an improver in the art of medicine. His attainments as a polite scholar will be preserved by writings in which he displayed correct taste, extensive reading, and original views of his subjects. In the common relations of life he was a man of inflexible honour and integrity, a warm and steady friend, and a tender and indulgent parent.—*London Monthly Magazine, March*, 1815.

We have to lament the death of that celebrated and truly deserving character, JAMES WARE, Esq. of Bridge-street. This gentleman who has contributed so much to improve the practical part of surgery in his department as an oculist, was not more distinguished as a surgeon than for his enlarged philanthropy. In partnership with the late Mr. Jonathan Wathen, he was probably the first English surgeon who separated this branch of the art from general practice. When Mr. Phipps, grandson to Mr. Wathen, became of an age to take part in the practice, the two former separated, Mr. W. uniting with his grandson. It was soon found that the town was large enough for all three. The partners removed to the west, and Mr. Ware continued for the remainder of his life in the city, with a country house at Turnham Green, which enabled him to attend his patients in the west without inconvenience. Apparently of a delicate frame, a premature old age assailed him, though constantly prudent in every part of his life. We shall, in our next, give a more detailed account of his history, but cannot conclude these few remarks without mention of his exemplary liberality to the Society for the Relief of Widows and Orphans, of which he was among the early founders, and for several years President. Besides his customary donation, he presented them during life with a fund, the interest of which was divided among such of the directors as attended the quarterly courts with punctuality, and staid the whole time of necessary business.

We have in one of the newspapers a remark which would lead us to suppose, that Mr. Ware had relinquished the use of laudanum altogether in inflammation of the eye. As his

experience increased, it is probable that he varied his remedies; but the *vinous* solution of opium was, we believe, always retained.—*London Medical and Physical Journal, May*, 1815.

It is with much concern that we announce the death of SMITHSON TENNANT, Esq. F.R.S. and Professor of Chemistry in the University of Cambridge; a man in whom genius, talents, and virtue, were united in their highest forms. Although his industry was checked by a frame naturally weak, and a languid state of health, his acquirements in science were general, in chemistry most profound, with a correctness not exceeded by Woolaston.

The circumstances of Mr. Tennant's death were most afflicting. He was returning from France, where he had been several months, and was waiting at Boulogne for a favourable wind. He had actually embarked on Wednesday, the 22d of February, but the vessel was obliged to put back: and it was determined, if the weather should be tolerable, to make another trial in the evening. During the interval Mr. T. proposed to a German officer of distinction, whom he had accidentally joined on the road, and who was also going to England, to ride with him to Bonaparte's Pillar, near Boulogne. In returning he deviated a little to look at a fortification near the road. But as they were attempting to pass a draw-bridge, which, owing to some neglect, was not properly secured, the bridge gave way, and they were precipitated into the trench. The officer fortunately escaped without any serious hurt; but Mr. Tennant was found fallen under his horse, and was taken up speechless, his skull and one of his arms being considerably fractured. He was conveyed with difficulty to the hospital at Boulogne, as the nearest and most convenient place to receive him, and expired in half an hour. His remains were interred at Boulogne.—*Ibid.*

RECENT PUBLICATIONS.

The History of the Small Pox, traced from its oriental origin in Arabia, Africa, Europe, and America, and interspersed with historical and biographical incidents. By James Moore, director of the National Vaccine Establishment.

Reflections on Fever, intended to point out the principles upon which a systematic and useful method of treatment might be established. By Robert Calvert, M. D. 8vo.

Observations on the Bulam Fever, the disease which has of late years prevailed in the West Indies, on the coast of America, at Gibraltar, Cadiz, and other parts of Spain, with a collection of facts proving it to be a contagious disease. By William Pym, Esq. 8vo.

A View of the Relations of the Nervous System, in Health and in Disease; containing selections from the dissertation to which was assigned the Jacksonian prize for the year 1813; with additional illustrations and remarks. By Daniel Pring. 8vo.

Medical and Surgical Remarks, including a description of a simple and effective method of removing Polypi from the Uterus, Tonsils from the Throat, &c. Likewise Observations on the different modes of Opening the Bladder, in retention of urine, from obstructions in the Urethra and Prostate Gland; and a description of a more safe and effectual method of performing the Operation, illustrated by Cases. By Edward Grainger. 8vo.

Sketch of the new Anatomy and Physiology of the Brain and Nervous System. By Thomas Forster, F. L. S. 8vo.

Researches on Consumption and other Disorders of the Lungs; from the French of G. L. Bayle, D. M. P. By William Barrow, M. D. illustrated by plates. 8vo.

Mr. G. J. Guthrie has published a work on Gun Shot Wounds of the Extremities, requiring the Different Operations of Amputation, with their After Treatment, establishing the advantages of amputation on the field of battle, to the delay usually recommended; exhibiting the improvements introduced

by military surgeons in the operations of amputation at the hip joint, shoulder joint, thigh, arm, leg, foot, and hand, during the Peninsular war.

INTENDED PUBLICATIONS.

Shortly may be expected, a History of the Pestilential Disorder that broke out in Andalusia in 1800, with detailed accounts of the fatal epidemics at Gibraltar in 1804, and at Cadiz in 1810 and 1813; to which will be added, observations on the remitting and intermitting fever in the military hospitals at Colchester after the return of the troops from Zealand in 1809: by Sir James Fellowes, physician to the forces, and inspector of military hospitals.

Mr. Astley Cooper is preparing for republication his work on the Anatomy and Surgical Treatment of Hernia.

Sydenham Edwards, Fellow of the Linnean Society, and late designer of the Botanical Magazine, is now publishing in monthly numbers, *The Botanical Register*, each number to consist of eight coloured plates, accompanied by their history and mode of treatment. The designs to be made from living plants.

INTENDED AMERICAN PUBLICATIONS.

Thomas Dobson will publish in a few days, an edition of MURRAY'S MATERIA MEDICA, with Notes by Dr. CHAPMAN, Professor of Materia Medica in the University of Pennsylvania; in two volumes octavo.

Now in the press, Prodromus Floræ Philadelphicæ; Plantarum quæ hactenus exploratæ fuere, qæque in ipso opere ulterius describentur, exhibens enumerationem: or, Prodromus of the Flora Philadelphica; exhibiting a list of all the Plants to be described in that work, which have as yet been collected. By William P. C. Barton, M. D. Fellow of the College of Physicians of Philadelphia; Member of the American Philosophical Society, &c.

This work contains a list of about four hundred and fifty genera of indigenous and commonly cultivated plants, collected within a circuit of ten miles around the city of Philadelphia; and though purporting, according to the title, to be *a mere catalogue*, contains beside, brief descriptions of the essential generic characters, the form of the leaves, and the natural families of Jussieu. It will serve as a Manual for the students of Botany, as well as botanists, who make excursions in the vicinity of this city in quest of plants.

This Prodromus will be published about the first week in November next, when it may be had *only* of the author, No. 222, Walnut Street, and at the Pennsylvania Hospital; price one dollar and fifty cents. The author has printed but a small edition, and as nearly one half of the number of copies printed, is already subscribed for, those persons who are desirous of possessing the work, are informed, that subscribers who send in their names to the author after the appearance of this notice, and before the publication of the work, will purchase it at one dollar and twenty-five cents.

INDEX.

Page

APPARATUS, Gas, improved by Melville - - - 123
Analysis of the Bones in Mollities Ossium of the Spine 157
Anastomosis of the Arteries at the Groin - - - 162
Albay, Volcano of - - - - - - - - - 219
Anæsthesia, Case of - - - - - - - - 349
Aqueous Humour, effects of Evacuating the - - - 52
Abscess of anterior Chamber of the Eye - - - 70
Abernethy's Surgical Observations on Tumours and on Lumbar Abscesses - - - - - - 109
Abscesses, Lumbar, Observations on - - - - - 120
Arteries, on the Ligature of - - - - - - 137
Aneurism, on the Ligature of Arteries in cases of 137
Arteries at the Groin, Anastomosis of - - - - 162
American Philosophical Society, Officers of - - - 262
Adhesion of Separated Parts - - - - - - 417
Alibert, his Elements of Therapeutics & Materia Medica 524
on Mineral Waters - - - - - - - *ibid.*
on Diseases of the Skin - - - - - *ibid.*

Brain, Morbid Anatomy of - - - - - - 130
on the Injuries of - - - - - - 257
Barton, Jno. Rhea, his Description of a Sick Bed - - 235
Baltimore Bill of Mortality - - - - - - 266
Bark, of the Coccoloba Uvifera, Experiments on - - 297
Barton, Dr. Wm. P. C. his Translation of Gregory's Dissertation, &c. - - - - - - - 380
Balfour's Observations on the Reunion of Parts - - 417
Bailey's Case of the Reunion of divided Parts - - - 429
Bell, Charles, on the Muscularity of the Uterus - - - 37
Bell, Charles, on the Muscles of the Ureters - - 339
Bed for the Sick—Barton's description of - - - 235
Bills of Mortality - - - - 265, 266, 267, 268

Bichat, Biographical Sketch of - - - - - - 507
Biography of Dumas - - - - - - - - 527
Bitumen, Analysis of a new, found in Saxony - - 542
Bladder, Anatomy of the Neck of - - - - - 342
Blood Vessels of the Brain—enlargement of - - - 258
extravasation of in the Brain, - - - - 258
Bloodletting cures Trismus - - - - - - - 259
Bones, on the formation of Human - - - - 131
of the Spine, Analysis of, in Mollities Ossium 157
Bobbin, its effects in the Ligature of Arteries - - - 139
Bostock, on the Mollities Ossium of the Spine - - 157
Boston, Bill of Mortality, for 1814 - - - - - 265
Bostock on the Bark of the Coccoloba Uvifera - - 297
Boylston Dr., Biographical Sketch of - - - - 398
Boyer's Treatise on Chirurgical Diseases & Operations 519
Brain, Home on the Functions of - - - - - 456
Brodie's Researches on Diseases of the Joints - - - 168

Cæsarian Section—action of Uterus in - - - 45
Cataract, Observations on - - - - - - - 83
Carcinoma, Abernethy's Observations on - - - 115
Cancer, palliative treatment of - - - - - - 118
Cartilages of the Joints, on the ulceration of - - 186
Carlisle's account of the Colburn Family - - - 214
Camarines, Volcano in the province of - - - - 219
Carpue on the Restoration of a lost Nose - - - 429
Carpal Extremity of Radius, on the fracture of - - 471
Chaptal on the Manufactures injurious to Health - - 464
Carmichael on Venereal Diseases, &c. - - - 476
Chevalier's Case of Extravasation within the Theca-vertebralis - - - - - - 284
Chevreul on Margarine - - - - - - - 404
Chlorine, on the Properties of - - - - - - 403
Climate, Change of, its influence in curing Diseases 380
Cornea, on some diseases of - - - - - - 52
Opacities of - - - - - - - 78
Cooper, Astley, on the Anastomosis of the Arteries at the Groin - - - - - - - 162
Colburn Family, account of - - - - - 214
Concussion of the Brain, effects of - - - - 258
Coccoloba Uvifera, Experiments on the Bark of - 297
Colchicum Autumnale, a specific for the Gout - - 359
Copper, on the modes of Precipitating - - - - 403

Colles on Fracture of Radius - - - - - - 471
College of Physicians, Officers of - - - - - - 409
Cold, Observations on the Gangrene produced by - - 520
Contagion, among Cows and Oxen - - - - - 522
Croup—Double's prize Dissertation on - - - - - 256
Curry's Case of Remitting Ophthalmia - - - - - 322

D'Abuisson's account of a shower of Meteoric Stones - 405
Deschamps on the cultivation of the Tea Plant - 257
Dissertations, Inaugural, presented to the Faculty of Paris 524
Diseases of the Prostate Gland - - - - - - 94
of the Joints - - - - - - - 168
Distillation, double, by Steam - - - - - - 131
Dispensary, Philadelphia, Annual Report of - - - 132
Managers and Officers of - - - - - 263
Diseases cured by change of Climate - - - - 380
Diseases, Venereal, confounded with Syphilis - - - 476
Duffield, Dr. Saml. his death announced - - - - 527

Elements of Medical Jurisprudence - - - - 592
Eye—on the effects of evacuating the aqueous humor of the 52
on the Inflammation of - - - - - - *ib.*
Eye-Ball, on the Injuries of the - - - - - - 76
Eye, on perceiving objects on the back part of - - 224
Eyes, weak, Remedy for - - - - - - - 409
Epidemic, Malignant, of the Southern States - - - 273
Eloge of Ambrose Paré - - - - - - - 238
Eulogy on Dr. Warren, by Dr. Jackson - - - - 401
Eddy's hints for treatment of the Insane - - - 407
Extravasation, Spontaneous, within the Theca Vertebralis 284

Farmer's Kalendar, by Young - - - - - 130
Faulkner on the Plague in Malta - - - - - 431
Farr's Elements of Medical Jurisprudence - - - 492
Fracture of the Carpal Extremity of the Radius - - 471
France, Exposé of State of Medicine in - - - 519
Flesh, on the Preservation of, in the Gases - - - 404
Freezing, on the Gangrene produced by - - - 520
Fingers and Toes, supernumerary - - - - - 114
Fishes of the State of New York—Mitchill's History of 408
Fœtus, singular, Description of - - - - - - 370
Fungus Hæmatodes, a case of - - - - - - 315
Functions of the Brain—Home on the - - - - - 456

Gland, Prostate, on the Diseases of - - - - - 94
Gas Apparatus, improved by Melville - - - - - 123
Graduates, Medical, for 1815—list of - - - - - 260
Gay Lussac, on the Properties of Iodine - - - - 403
Gases, their effects in preserving Flesh - - - - 404
Gangrene produced by Freezing - - - - - 520
Gregory on the Influence of Climate, &c. - - - - 380
Griscom on conducting Meteorological Observations - 303
Groin, Arteries at the, Anastomosis of - - - - 162
Gout—its effects on the Joints - - - - - - 213
a specific against - - - - - - - - 357

Harris, Dr. Robert, his death - - - - - - 267
Hemorrhage, secondary, on the Causes of - - - - 137
Hereford's remarks on wounds of the Knee Joint - 233
Hermodactyl, on the - - - - - 359
Health, on the Manufactures injurious to - - - - 464
Hirudo Medicinalis—Johnson's Treatise on - - - - 131
Hildebrandt on preservation of Flesh in the Gases - 404
Home's Observations on Diseases of Prostate Gland - 94
Housham on the formation of human Bones - - - 131
Home on the effect of Injuries in the Brain, &c. - - 257
on the Functions of the Brain - - - - - 456
Hospital, Pennsylvania, Abstract of Annual Report - - 410
Physicians of - - - - - *ib.*
Humour, Aqueous, of the Eye, effects of evacuating the 52
mode of discharging 59
Hydatids in the Brain - - - - - - - - 258
Humane Society, Managers and Officers of - - - 264

Inflammation of the Synovial Membrane - - - - 170
Japan, on the Tea Plant of - - - - - - 256
Jackson, Dr. his Eulogy on Dr. Warren - - - - 401
Insane, Hints for the treatment of - - - - - 407
Intelligence, Medical and Philosophical - 130, 256, 403, 519
Jenner, highly esteemed in Sweden - - - - - 131
Iris, Prolapsus of, on evacuating the aqueous Humour in 75
Johnson on the Medicinal Leech - - - - - - 131
Joints, Pathological Researches on Diseases of - - 168
on the Ulceration of the - - - - - - 186
Joint of the Knee, case of wound of - - - - - 230
Iodine, on the Properties of - - - - - - - 403
Injuries in the Brain affecting Sensation - - - 257
Jurisprudence, Elements of Medical - - - - - 492

Klapp's, Dr. Joseph, singular Obstetric Case - - 361
Knee-Joint, case of wound of - - - - - - 230

Langstaff's Case of Fungus Hæmatodes - - - 315
Leech, Medicinal—Johnson's treatise on - - - 131
Leroy, on the Contagion among Cows, Oxen, &c. - - 522
List of recent publications - - 134, 270, 413, 558
Ligature of Arteries, in Hemorrhage - - - 137
Lumbar Abscesses, on the treatment of - - - 120

Marshall on Morbid Anatomy of the Brain - - - 130
Magendie, his Memoir on the Eye - - - - 224
Managers of the Philadelphia Dispensary - - - 263
Marcet's new mode of treatment of Chronic Rheumatism - 287
Manià a potû, on the treatment of - - - - 372
Margarine, so named by Chevreul - - - - 404
Malta, Observations on the Plague in - - - 431
Manufactures injurious to Health, on the - - - 464
Medical Sciences, the French Dictionary of - - 538
Melville on the improved Gas Apparatus - - - 123
Medical and Philosophical Intelligence - 130, 256, 403, 519
Meteorological Observations - - - - 133, 411
Membrane, Synovial, on the Inflammation of - - - 170
on the Ulceration of - - 175
Morbid change of Structure of - 177
Meteorological Observations, on the mode of conducting 303
Meadow Saffron, vide Colchicum Autumnale - - 359
Memoir, Biographical, of Count Rumford - - 389
of Dr. Boylston - - 398
Meteoric Stones, account of a Shower of - - - 405
Medicine in France, Exposé of the State of - - 519
Mitchill on the Natural History of Fishes of the State of New-York - - - - - - - - - 408
Mollities Ossium of the Spine - - - - - 157
Mortality, Bill of, for Boston for 1814 - - - - 265
for Baltimore for 1814 - - - 266
for New York for 1814 - - - 267
for Philadelphia for 1814 - - 268
Morveau on the Manufactures injurious to Health - 464
Muscularity of the Uterus - - - - - - 37
Muscles of the Ureters, their effects, &c. - - - 339

Nancrede's translation of Magendie's Memoir - - 224
Norcom, Dr. his account of the Malignant Epidemic of the Southern States - - - - - - - 273

Nose, restoration of, by Carpue - - - - 429
Notice, Biographical, of Dumas - - - - 527
Nysten's Dictionary of Medicine, Notice of, - - 525

Ophthalmia, relieved by evacuation of the Aqueous Humour 57
Puriform - - - - - - - 61
Gonorrhœal - - - - - - 64
Remitting, cured by Opium - - - - 322
Observations Meteorological - - - - 133, 411
on the best mode of conducting 303
Obstetric case, singular - - - - - - 361
Oxygen gas, restores suspended animation - - 540
Opium, its success in cure of remitting Ophthalmia - 322
useful in the cure of Mania á potû - - - 375
Orfila's treatise on Poisons, notice of, - - - 525

Pathological Researches on Diseases of the Joints - - 168
Paré, Ambrose, Eloge of - - - - - - 238
Plague, Observations on the - - - - - - 431
Pressure, on the effects of, on the Brain - - - 258
Perspiration, how excited to cure Rheumatism - - 291
Pennsylvania Hospital, Abstract of Annual Report - 410
Physicians of - - - - - - - *ib.*
Petit Radel, author of the Surgical part of the Encyclopedia 523
Philadelphia Dispensary—Annual Report of - - - 152
Managers and Officers of - - - 265
Philosophical Society, American, list of Officers - - 262
Philadelphia Bill of Mortality for 1814 - - - 268
College of Physicians, Officers of - - 409
Prostate Gland, on the Diseases of - - - 94
Poisons, Orfila's treatise on - - - - - 525
Publications, recent, list of - - - 134, 270, 413, 558
Pus, on the formation of in the Brain - - - 258
Pyrola Umbellata, its diuretic effects - - - - *258*
Physicians of the Philadelphia Dispensary - - - 263
College of, Officers of - - - 409
Physiology, Richerand's Elements of, new edition - - 522
Radius, on the fracture of the Carpal Extremity of - - 471
Respiration, Experiment on - - - - - - 540
Review of Home's practical Observations on the treatment
of diseases of the Postate Gland - - - 94
of Abernethy's Surgical Observations on Tumours,
and on Lumbar Abscesses - - - 109

Review of Barton's translation of Gregory's Dissertation on the Influence of a change of climate in curing diseases - - - - - - - - - 380
of Carmichael's Essay on the Venereal diseases which have been confounded with Syphilis, &c. 476
of Farr's Elements of Medical Jurisprudence 492
Report, Annual, of Philadelphia Dispensary - - - 132
Researches on the Diseases of the Joints - - - 168
Rheumatism, chronic, new mode of treatment of - - 287
Reunion of separated parts—cases of - - - 417
Report of the Manufactures injurious to Health - - 464
Richerand's Physiology, sixth edition, Notice of - - 522
Roux's Works on Operative Surgery recommended - 520
Memoir concerning Circular Amputation of Limbs 524
Case of Divergent Strabismus - - - - 525
Rumford Count, Biographical Memoir of - - - 389
Staphyloma, on discharging the aqueous Humour in - - 73
Sarcoma—Abernethy's Observations on - - - 113
Sawrey's Morbid Anatomy of the Brain - - - - 130
Saffron, Meadow, vide Colchicum Autumnale - - 359
Section, Cæsarian, on the Muscular action of Uterus in - 45
Steam, on double Distillation by - - - - 131
Sensation, how affected by injuries in the Brain - - 257
Sweating, by Muscular action, cures Rheumatism - - 291
Specific against the Gout - - - - - - 357
Sketch, Biographical, of Dr. Boylston - - - - 398
of Bichat - - - - 507
Silliman, professor, Letter from, on Gas Apparatus - - 123
Silver, Indian method of oxydizing - - - - 543
Spine, Mollities Ossium of the - - - 57
Sick-Bed, Description of a - - - - - - 235
Sciatica, new mode of treating - - - - - 287
Stomach, Human—on the vascular appearance of - - 1
Society, American Philosophical, Officers of - - 262
Vaccine—Annual Report of - - - 264
Humane—Managers and Officers - 264
Snowden, Dr., on the treatment of Mania à potu - - 372
Stones, Meteoric account of a shower of - - - 405
Synovial Membrane, on the Inflammation of - - 170
on the Ulceration of - - - - 175
Morbid change of Structure of - - - 177
Syphilis, Venereal Diseases confounded with - - 476

Travers' Observations on Cataract - - - - 83
on the Ligature of Arteries - - - 137
Tape, its effects in the Ligature of Arteries - - - 139
Taliacotius's operations for uniting divided parts - - 419
Tenant on doubleDistillation by Steam - - - 131
Tea Plant of Japan, on the Cultivation of - - - 257
Theca Vertebralis, spontaneous Extravasation within - 284
Twist, its effects in the Ligature of Arteries - - 139
Twine, its effects in the Ligature of Arteries - - - 139
Trismus, cured by Bloodletting - - - - 259
Tincture of Colchicum Autumnale used in Gout - - 360
Toes and Fingers, supernumerary - - - - 214
Thompson, Benjamin Count Rumford, his Death - - 267
Biographical Memoir of - - - 389
Toulouse, Shower of Meteoric Stones near - - - 405
Tumours—Abernethy's Observations on - - - 109

University of Pennsylvania, Medical Graduates in - - 260
Uterus, on the Muscularity of - - - - - 37
Ulceration of the Synovial Membrane - - - 175
Ureters, Muscles of described &c. - - - 339
Vaccination, State of in Sweden - - - - 533
Vaccine Society—Annual Report of - - - 264
Vauquelin on precipitating Copper - - - 403
on the Natural action of the - - 42
Action of, producing Rupture - - - 43
Muscular action of, in Cæsarian Section - 45
of the Cartilages of the Joints - - 186
Ventricles of the Brain, accumulation of water in - - 257
Venereal Diseases confounded with Syphilis - - 476
Vimont's Eloge of Ambrose Parè - - - - 238
Volcano of Albay, account of - - - - - 219

Wardrop on evacuating the aqueous humour of the Eye 52
Watson's Case of wound of the Knee Joint - - - 230
Water accumulated in the Ventricles of the Brain - - 257
Warren, Dr. John, his Death announced - - - 267
Eulogy on - - - - - - - 401
Want on a Specific against Gout - - - 357
Withredge operates for Aneurism in the Groin - - 259
Wound of the Knee Joint, case of - - - - 230
Wounds in the Brain—effects of - - - - - 258

Yelloly, Dr., on the Vascular appearance of the Human Stomach 1
his case of Anæsthesia - - - 349
Young's Farmer's Kalendar—new edition - - 130